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ABSTRACT

Practices and policies regarding graded assessment in vocational education and training (VET) in Australia were examined. Data were collected through a literature review; focus groups involving approximately 120 stakeholders in 5 states; interviews with 49 representatives of registered training organizations (RTOs); and surveys of RTOs, students, and peak bodies. Despite the existence of significant initiatives related to graded assessment in VET, support for graded assessment was not universal among stakeholders. A large percentage of respondents deemed consistency in graded assessment across national qualifications the most important consideration. Few policies existed to assist RTOs in valid, consistent implementation of graded assessment. Even where policy guidelines existed, assessment methods varied. Lack of transparency in reporting was another major concern. The researchers proposed a framework for graded assessment consisting of the following tiers: (1) at the national level, a set of overarching principles providing guidance on what should be graded and how; (2) at the state level, policy or guideline development consistent with national principles; and (3) at the RTO level, autonomy to develop local policies, procedures, and guidelines, albeit within national/state principles and guidelines. (The bibliography lists 49 references. The following items are appended: four graded assessment models and approaches; the survey instruments; and a list of research participants.) (MN)

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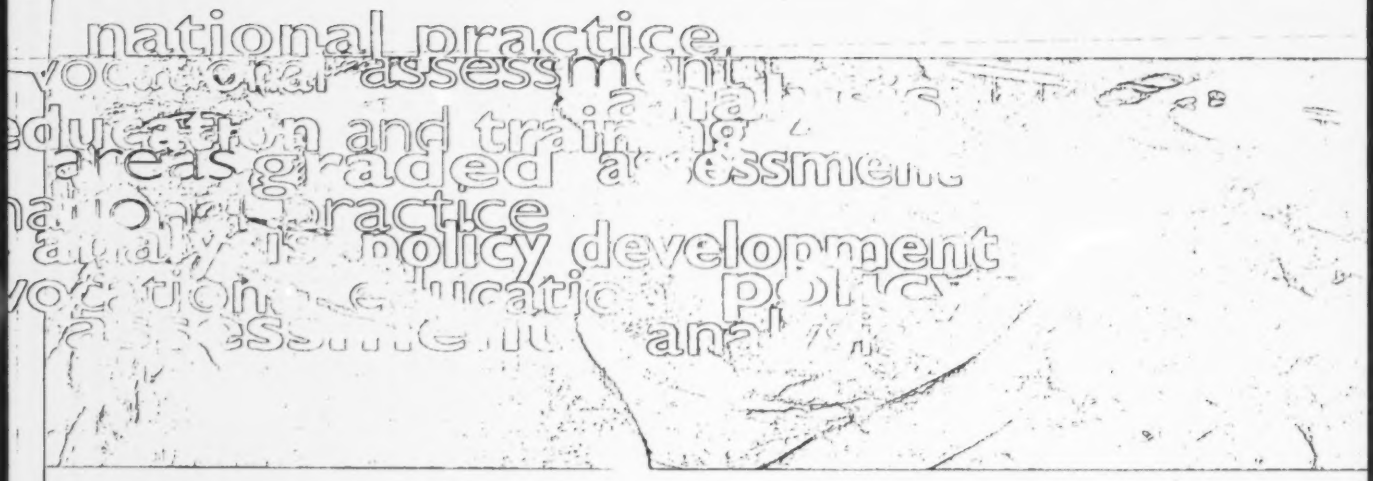

Graded assessment in vocational education and training

An analysis of national practice, drivers and areas for policy development

assessment

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Melanie Williams

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Executive summary

Purpose of the research

In the absence of clear policy on graded assessment in vocational education and training (VET), a range of practices has evolved in the Australian national training system. The purpose of this study was to update the research to take account of the changes in the VET environment.

Issues examined

Examination of the literature and key stakeholder consultations were undertaken to identify the issues to be investigated in the study. These issues were categorised under four headings:

- validity, reliability and consistency
- cross-sectoral concerns
- costs associated with graded assessment
- changes in the national training environment that have affected graded assessment.

These four categories then formed the basis of discussion with representatives from the Australian National Training Authority (ANTA), state training authorities, registered training organisations, universities, employers, unions and learners.

Key findings

The research has identified that 'good' practice in competency-based assessment itself, let alone *graded* competency-based assessment, is still not fully understood nor universally implemented across the national training system. It has been difficult to draw general conclusions about the nature and extent of grading practices because of the inconsistent and fragmentary implementation of graded assessment in the VET sector.

Nevertheless, a number of key findings can be identified:

- Significant initiatives, such as statewide trials in Western Australia and Queensland, are under way. In spite of this, however, support for graded assessment is not universal across stakeholders.
- A sizeable majority of respondents from all stakeholder groups considered graded assessment to be as important as, or more important than, other pathway mechanisms, such as articulation or partnership arrangements.
- In evaluating key questions about graded assessment, such as whether, why and how to grade, consistency in graded assessment across national qualifications was deemed to be the most important consideration for a large proportion of the respondents.

- Few policies or guidelines exist to assist registered training organisations in implementing graded assessment in a valid and consistent manner.
- Even where policy guidelines exist, there is variation in the way graded asessment is carried out.
- Instances of 'good' practice in graded assessment were identified. These incorporated features such as professional development of assessors, provision of policy and/or guidelines, provision of exemplars of assessment tools and grading schemas as well as validation processes.
- Limited information is available and findings are mixed regarding the additional costs that may be incurred in implementing a graded assessment system. Indeed, there appears to be little will to explore this issue at either registered training organisation, state or national level.
- The lack of transparency in reporting is of major concern. The wide variation in grading methodologies employed by registered training organisations leads to significant discrepancies in what the grades represent. Transparency in reporting is essential to make the grades meaningful to stakeholders.

Proposed framework

The researchers have proposed a framework aimed at enhancing the validity, reliability and transparency of graded assessment practices at a national level, without diminishing the capacity of providers to respond to client needs and to reflect local contexts. The proposed framework consists of three tiers:

- At national level, a set of overarching principles should provide guidance on what should be graded and how, the number of levels of competency development to be assessed and for what purposes the grading may be used. These would complement the Australian National Training Authority principles of assessment for VET, with which it is proposed graded assessment policies and practices at state and registered training organisation levels should comply.
- At state level, policy or guideline development is needed, consistent with national principles.
- At registered training organisation level, there should be autonomy to develop local policies, procedures and guidelines, albeit within national/state principles/guidelines, that meet local needs and support the implementation of graded assessment.

Proposed future directions

The following discussion of future practice in this area is in no way designed to imply that graded assessment should be implemented universally across the Australian VET system. However, in view of the wide range of models and approaches to graded assessment currently in use, the following suggestions are made in an attempt to enhance the validity, reliability and consistency of grading practices nationally in those contexts where graded assessment is deemed to be appropriate:

- The option to grade competency-based assessment should remain discretionary for individual organisations.
- Graded assessment should be addressed at national level for guidelines on developing schema for grading.

- Certain principles should apply when developing a graded assessment system at national, state and local registered training organisation level. These principles are that graded assessment be:
  - criterion-referenced
  - applied once competence is determined
  - easily understood by both the assessor and the person being assessed.
- Up-front and ongoing professional development in graded assessment techniques and methodologies ought to be provided for new and existing trainers or assessors concurrent with the development and maintenance of a graded assessment system.
- Competency standards in the training package for assessment and workplace training should include information on the units of competency capable of graded assessment and guidance on how to develop grading schema which reflect content-specific criteria.
- Appropriate validation processes, such as consensus moderation, should accompany a graded assessment system.

Introduction

Background

When competency-based training and assessment were both introduced into the vocational education and training sector in Australia in the early 1990s, assessment was to be conducted and reported using a binary system of competent/not yet competent. However, there were no clear guidelines about whether learners' levels of performance could also be assessed and reported, a practice generally known as 'grading'. Debate has raged about whether the principles which underpin competency-based training and assessment imply that only one standard of performance should apply, or whether graded assessment is possible within a competency-based system.

In the absence of clear policy on grading, a range of practices has evolved in the Australian national training system. As Thomson, Mathers and Quirk (1996) point out, 'although there is a national commitment to competency-based assessment, there is no policy commitment to grading. Grading however, does take place within competency-based assessment in Australia but is not applied in any consistent manner.' When this research was conducted in 1995, implementation of competency-based assessment was estimated at between 30% and 80% in TAFE colleges and even less in industry. The practice of grading was estimated in one study at around 60% in TAFE colleges and less than 10% in non-TAFE providers (Smith 1996), while a different study put the practice in TAFE colleges at around 30% (Lundberg 1996).

While it was considered in the early days that it would be premature to introduce a graded competency-based assessment system when a two-tiered criterion-based assessment system was still in the process of implementation, competency-based training and assessment is now firmly bedded down. Other changes in the VET environment in the last five years include the proliferation of private training organisations, and the delivery and enhanced credit transfer of VET programs in both the school and higher education sectors. Furthermore, under training packages, larger proportions of assessments are now conducted in the workplace, where the earlier research showed that employers were more reluctant to use graded assessment. These changes emphasise the much greater multi-directional movement between educational sectors and the workplace that have occurred since the 1996 research was conducted.

There are many factors which influence any decision to grade or not to grade assessment. It was not the intention of this study to revisit the grade debate; rather, in recognition of the fact that graded assessment does take place and that it is currently implemented in a piecemeal way, this study aimed to update research into graded assessment to take account of changes in the VET environment that have had an impact upon the impetus for graded assessment, in order to inform policy development.

Thus, in order to avoid a preoccupation with the debate about whether or not to grade, the focus of the study was directed to an examination of the various approaches to grading that may be employed where a decision to grade has already been made. This does not necessarily imply that grading is appropriate in all circumstances, in all contexts and across all units of competency.

To further determine the scope of the research into the various methodologies used for grading or scoring assessment, 'graded assessment' was defined as the practice of assessing and reporting aspects of varying levels of performance in competency-based vocational education and training and is generally used to recognise excellence (adapted from Thomson et al. 1996). Grading refers to the wide range of practices of 'merit-recognition' (Quirk 1995, p.10), to include approaches such as

scoring, percentages, performance levels, profiling, alpha-numerical identifiers and additional criteria. Therefore, it was anticipated that the research would identify a range of approaches to grading, some of which may not be compatible with the philosophy of competency-based training and assessment.

Although it was the original intention of the research to include grading practices in the VET-in-schools context, a concurrent study by Griffin et al. (2000, 2001) detailed and analysed the practices within each state. Rather than duplicate the study, a summary of findings of their research appears later in this report.

Significance of the study

There is now significant momentum in favour of enhancing consistency in the national training system. To this end, the Australian Quality Training Framework has been strengthened from the former Australian Recognition Framework. In this current climate, moves towards enhancing consistency in graded assessment are appropriate and timely. In addition, a review of the training package for workplace assessment and training is currently under way. This study, with its implications for policy and practice in grading assessment, will provide timely input into that review.

The outcome of this study is to put forward a proposal for policy development that will increase the consistency and validity of grading practices, without diminishing the flexibility of providers to assess and report learner outcomes in ways that are responsive to the range of purposes for assessment, local and state-based stakeholder needs, and that facilitate cross-sectoral articulation.

Definitions

Defining assessment

There are various interpretations of the term 'assessment'. The training package for assessment and workplace training considers assessment is a 'process of collecting evidence and making judgements on whether competency has been achieved (1998, p.135). However, a more extended definition as determined by Gillis and Bateman (1999, p.7) provides a framework for discussion within this report. Assessment can be defined as:

> . . . the purposeful process of gathering appropriate and sufficient evidence of competence, and the interpretation of that evidence to enable a judgement. Included in this model is the recording of the evidence and the decision, as well as the communication of the outcomes to key stakeholders.
>
> (Gillis & Bateman 1999, p.7)

Gillis and Bateman's model (1999, pp.7–8) can be interpreted in a graded competency-based assessment context to include:

- clearly defining the purpose
- identifying and documenting the evidence required to determine competence as well as levels of performance
- using appropriate evidence gathering methods and tools
- interpreting the evidence against the competency standards and grading schema to make a judgement
- established and clear record-keeping procedures for the performance levels

- reporting appropriate outcomes of the assessment that provide information regarding the performance levels to key stakeholders.

Defining grading

From reviewing the literature it is clear that there are various interpretations of what 'grading' means when it is coupled with competency-based assessment. This appears to reflect what each sector/training provider/researcher defines as 'competency' and which in turn reflects the model or approach to graded assessment. Thomson, Mathers and Quirk (1996) note that there is 'no universal agreement on the meaning' and define 'grading' or 'graded assessment' as 'the practice of assessing and reporting levels of performance in … competency-based vocational education and training which is generally used to recognise merit and excellence' (p.3). Peddie (1995), on the other hand, notes that in New Zealand most people interviewed believed that there is a distinction between 'merit' and 'excellence'; however, the New Zealand Qualifications Authority policy does not explain what 'merit' is.

Rumsey (1997, p.62) defines graded assessment as an approach that 'provides grades for combinations of demonstrated knowledge and performance'. Additional terms that describe or equate to 'grading' or the practice of differentiating performance of competence include: 'performance levels' (Smith 2000), 'levels of performance' (Thomson et al. 1996), 'levels of competency' (Dickson & Bloch 1999) and 'levels of achievement' (Strong 1995).

Other principal researchers, such as Peddie (1995) and Griffin et al. (2000, 2001) fail to define 'graded assessment'. Much of the discourse tends to describe a range of models or approaches to 'graded' and 'non-graded' assessment and by default define the concept. Both Peddie (1995) and Rumsey (1997) provide extensive discussion into various models or approaches. However, Griffin et al. (2000, 2001) define 'graded' and 'non-graded' in terms of the paradigm in which both occur—selection or recognition. Credentials are used for a range of purposes 'including employment and entrance to higher and further education … hence it needs to be associated with a process that allows for differentiation among students on the basis of merit and achievement'. In the competency-based arena the 'emphasis is on the development … acquisition and demonstration of competencies'. It is a system that is not designed to be competitive and there is no need to differentiate between individuals; it is for recognition (Griffin et al. 2000, p.1).

The definition of 'graded assessment' adopted for this research is a modified form of that of Thomson, Mathers and Quirk (1996) noted earlier, as the practice of assessing and reporting aspects of varying levels of quality of performance in competency-based vocational education and training and is generally used to recognise excellence (adapted from Thomson et al. 1996). Grading refers to the wide range of practices of 'merit-recognition' (Quirk 1995, p.10) to include approaches such as scoring, percentages, performance levels, profiling, alpha-numerical identifiers and additional criteria.

In addition, 'grading schema' is a generic term used to describe whatever assessors use to evaluate evidence in order to make a decision regarding performance, to assign a grade, and to report the outcome. Grading schemas may include such items as the criteria against which performance is measured, profiles describing aspects of performance, and the marking schema or rubrics which are used together to assign and report a grade.

Defining validity, reliability and consistency

Virtually all the literature reviewed states that 'graded' assessments should be both valid and reliable, or that they should lead to valid and reliable judgements. However, the literature gives very little insight into the impact which graded assessments have on the validity and reliability of assessments.

The terms 'validity' and 'reliability' are extensively explained across the classical test literature, and Gillis and Bateman (1999) provide a recent overview of these concepts in relation to competency-

based assessment in the VET sector. They identify a number of different types of validity, citing the most common to be 'face', 'content', 'criterion-related', (predictive and concurrent), 'construct' and 'consequential' (Gillis & Bateman 1999). While these authors (1999, p.9) point out that it is widely acknowledged that face validity is not a true form of validity, they state that '... its importance lies within the acceptance and credibility of the assessment outcomes by the key stakeholders ... the importance of face validity in a competency-based assessment system cannot be underestimated'. However, they consider that validity of assessment lies in the use and interpretation of the evidence collected as opposed to the assessment tool: 'that validity is largely determined through inferences made by both the task developers and users' (p.1). Validity is inferred not measured and is concerned with the truth or accuracy of assessment results.

Hager, Athanasou and Gonczi (1994) define validity as the extent to which the assessment method measures what it is supposed to measure. This definition ignores the role of interpretation of the evidence and the notion that validity is an inference determined by assessment tool developers and users. The American Educational Research Association (AERA) (1999) considers validity to be a unitary concept and that it 'refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests' (p.9).

Gillis and Bateman (1999) state that reliability 'refers to the extent to which an assessment can theoretically provide repeatable outcomes for candidates of equal competence at different times and/or places'. They discuss reliability of an assessment as being an estimate of how accurate or precise the measurement instrument is and how much error is included in the evidence. The AERA (1999) considers that reliability refers to the consistency of measurements when the testing procedure is repeated on a population of individuals or groups (p.25). Unlike validity, reliability can be measured and is concerned with the elimination of error. Therefore, its relationship to graded assessment is concerned with the process of observations and the rules for recording these observations.

The term 'consistency' has lately gained considerable currency in discourse on competency-based assessment. For example, a recent Australian National Training Authority project that led to the strengthening of the then Australian Recognition Framework focussed specifically on the concept of consistency in competency-based assessment. In this study, consistency was considered to involve assessors having a common understanding of:

- the standards
- evidence requirements
- allowable variations
- the basis on which assessment decisions are made. (Stowell 2000)

Rumsey (1997) couples the term 'consistency' with a 'graded assessment and reporting system'. Griffin et al. (2000, 2001) couple consistency with assessors and the interpretation of criteria as well as with key stakeholders and the interpretation of reports. Smith (2000) also uses the term 'consistency' in reporting his findings on graded assessment.

In this study, the concept of consistency was extended to investigate whether the variety of graded assessment practices currently in use in the Australian VET system might have an impact on the integrity of credentials system-wide.

Study methodology in brief

A review of Australian and relevant overseas literature was conducted to identify the issues to be investigated. These issues were explored through two focus group meetings, one held in Victoria and one by teleconference with interstate key stakeholders. The outcome of the focus groups included confirmation of the need to further examine the issues identified from the literature.

Other issues were identified through the focus groups. Semi-structured interview schedules were then developed to encompass these issues, and subsequently piloted and administered in five states and one territory.

Responses were gathered by an open-question telephone interview and by written questionnaire. As a means of validating the research, an issues paper describing a proposed framework for addressing graded assessment at a national level was generated from relevant findings from the literature and a preliminary analysis of the research data. The paper was widely distributed and feedback on the proposed framework was sought. A full description of the research methodology is included later in this report.

Review of literature

It was not the intention of this research to revisit the grade debate in relation to competency-based assessment, but to accept that grading in a competency-based assessment environment does occur, and to explore the factors which influence the decision to grade or not to grade. However it is important to contextualise the study both by reviewing the purposes for which graded assessment is used and by providing an overview of the arguments for and against graded assessment as described in the literature. The review of these arguments is outlined below prior to undertaking an examination of other issues in graded assessment. As *The grade debate* by Thomson, Mathers and Quirk (1996) was used as the basis for the review and discussion of the literature, the main focus for the researchers was to review literature since this publication as well as to establish what research or discourse has been undertaken on this topic since that date.

Purposes and drivers for graded assessment

Hager, Athanasou and Gonczi (1994) identify the following purposes underlying the use of grades:

- the need to provide more comprehensive information on performance
- the motivational impact of higher grades
- the effect on learning
- the impact on validity and reliability estimates
- the feasibility and implications of its introduction
- pressure from commerce and industry
- institutions of higher education requiring more detailed information for purposes of articulation,
- advanced standing or competitive entry

(Hager et al., pp.85–6)

Use of graded assessment for these identified purposes is confirmed elsewhere in the literature, for example: Carnegie (2000), Dickson and Bloch (1999), Foster (1998), Grayson et al.(2000), Hawke and Quirk (1996), Lundberg (1996) and Western Australian Dept of Training (1997).

Thomson, Mathers and Quirk (1996) provide an analysis of which stakeholder groups advocate which purposes for grades. Teachers or trainers and learners were all seen to support the use of graded assessment for purposes of motivation and reward for excellence, and for providing information about the amount and quality of learning achieved, with teachers or trainers also supporting graded assessment for improving the level of confidence in the assessment process. Employers were also seen to support the use of graded assessment for its capacity to motivate and reward, and for providing feedback on learning achieved. In addition, they were seen to support grading for the purposes of selection and promotion. Tertiary institutions, along with employers, were seen to support the use of grading for assisting in decisions about selection. Community groups were identified as supporting grading for the purpose of providing feedback about learning

achieved. Thomson, Mathers and Quirk (1996) stress however, that other members of these same stakeholder groups did not support grading.

Researchers identify additional purposes for the use of graded assessment. Quirk (1995), Thomson, Mathers and Quirk (1996), Rumsey (1997) and Smith (2000) identified that some training providers use graded assessment as a marketing tool in the belief either that grading makes a course more attractive to prospective students (Quirk 1995; Thomson et al. 1996), or that dispensing a large number of high grades makes the provider 'look good' (Rumsey 1997; Smith 2000). Strong (1995) cites the reliance on grades in TAFE as a predictor of success in further study, and the desire by employers for grades to predict future success in employment as further uses to which graded assessment is put. Dickson and Bloch (1999) identify a role for graded assessment in 'adding value' to competency standards, where the competency standards provide a starting point for improvement.

Quirk (1995) outlines specific purposes for which employers use graded assessment. They include ranking apprentices, selection for apprentice awards (both in-house and state-based), planning remedial training and awarding cash bonuses.

Griffin et al. (2001) view the issue as being the merging of two quite different educational paradigms—selection or recognition. The selection paradigm is primarily concerned with a defined purpose of assessment for selection purposes—into a course, job etc. and the recognition paradigm is concerned with assessment and credentialling. They consider that it is the selection paradigm that then drives the need for graded assessment.

Arguments for and against graded assessment

Much of the literature reviewed discusses the pros and cons of grading competency-based assessments (Byrne 1993; Carnegie 2000; Clayton 1995; Dickson & Bloch 1999; Johnstone 1993; Rumsey 1997; Smith 2000; Strong 1995; Toohey et al. 1995).

The arguments for and against graded assessment take two main forms: firstly whether grading is compatible with the philosophy and underlying principles of competency-based assessment at all, and secondly, discussions about the perceived advantages and disadvantages of grading for a range of stakeholders.

A number of authors refer to the view that grading is not compatible with competency-based training. For example Thompson, Mathers and Quirk (1996) outline the argument as follows:

> As any particular national competency standard defines only one level of performance, it can be argued that only one standard applies to the assessment and reporting of performance. In other words, competency standards do not allow for levels, one is either 'competent' or 'not competent'.
>
> (Thomson et al. 1996, p.10)

Hager, Athanasou and Gonczi (1994) note that the assumption that grading is antithetical to a competency-based assessment has been present in much of the Australian debate. In Foster's words, 'Graded systems of reporting are not seen as commensurate with competency-based training'. (Foster 1998, p.2). However while referring to the view, none of the literature supports it.

Wolf (1993) traces the origins of the preference for a single cut-off point in competency-based assessment to two main sources: firstly in the United Kingdom where government policy was to break down barriers to entry into craft occupations in particular, and where there was a strong commitment to access and equal opportunity. The other arose out of the 'mastery learning' movement in the United States of America. Wolf cites the proponents' argument that if a classroom program were tied to closely defined objectives, on which students were tested for 'mastery', the achievement level of a class would greatly improve.

However Wolf goes on to state that '… there is nothing about criterion-referenced testing which ties it to a pass-fail, on-off approach. Criterion-referenced assessments produce a 'distribution' of performance … a single pass-fail line is ONE way to partition that distribution but only one.' (Wolf 1993, p.13)

Hager, Athanasou and Gonczi (1996) also put forward arguments in support of the compatibility of grading with a competency-based assessment system. They contend that all assessment involves some form of grading or classification, and further that 'recognition of merit or grading beyond pass-fail is theoretically consistent with assessments in a competency-based system'. (Hager et al. 1994, p.85) Hager and his co-authors go on to state, 'To say that it is *possible* to grade in a competency-based system does not suggest that it is *desirable* or *feasible*. There is certainly no suggestion that grading is necessary' (p.87).

Arguments for and against grading are generally constructed in the light of the various purposes for which graded assessment is used, and the range of stakeholder interests that drive the push for or against grading.

Common arguments in favour of grading centre around alleged improvements in the quality of teaching and learning. These include the benefits of providing feedback to both teachers and learners, thus enhancing motivation for both (Byrne 1993; Rumsey 1997; Clayton 1995; Dickson & Bloch 1999; Hager et al. 1994; Johnstone 1993; Smith 2000; Western Australian Dept of Training 1997; Strong 1995); and the assertion that grading engenders a culture of excellence (Clayton 1995; Strong 1995). In support of this assertion, Smith (2000) reports that the overwhelming perception of those interviewed for his research was that (ungraded) competency-based training and assessment was promoting mediocrity.

Not all arguments about the effect of grading on the quality of teaching and learning favour its use. Hager, Athanasou and Gonczi (1994), Thomson, Mathers and Quirk (1996) and Toohey et al. (1995) argue that grading can lead to a sense of failure for struggling learners, and that mature-aged learners should not have to repeat experiences of school failure. Hambly (2000) worries that overemphasis on university entry and graded assessment in VET-in-schools programs might jeopardise the retention of some young people in education, particularly young people at risk. Thomson, Mathers and Quirk (1996) express concerns about the possibility of teaching effort being directed primarily at able students. This view is offset by that of Dickson and Bloch (1999) who assert that an ungraded competency-based assessment system supports struggling learners at the expense of high achievers. Toohey et al. (1995) express concern over the pressures and inequities inherent in any graded system.

One of the key concerns about graded assessment reported by a number of authors is that grading leads to educationally unsound competition between learners (and the resultant inevitable sense of failure for some), rather than collaboration (Hager et al. 1994; Thomson et al. 1996; Toohey et al. 1995; Western Australian Dept of Training 1997). However, the latter did not perceive increased competition to be a particular disadvantage. Indeed, Van de Graff (1990) considers the increased competition engendered by graded assessment as positive, as it duplicates the competition of the workplace. McCauley (1997) states that competition is even 'desirable' in the fashion industry.

One benefit of graded assessment in the workplace context identified in the literature comprises better feedback to employers about their employees' progress (Byrne 1993; Clayton 1995; Dickson & Bloch 1999; Rumsey 1997; Smith 2000; Strong 1995; Thomson et al. 1996; Western Australian Dept of Training 1997). Strong (1995) argues that this feedback enables high achievers to be extended on the job and also that aptitude for specialisation can be recognised. Another identified benefit of graded assessment in the workplace context consists of improved relationships between the registered training organisation and the employer, by meeting the needs of both the registered training organisation and industry in a way that improves the outcomes for learners (Western Australian Dept of Training 1997).

Not all the implications of graded assessment for the workplace were perceived to be positive however. Dickson and Bloch (1999) report the concern that grading might undermine industry

standards. 'It was argued that the industry standards were the accepted minimum standards … and that putting a grade against a competency would not support the value of the agreed level' (p.26). Peddie (1995) cites the views of some industry representatives who did not support grading for two reasons: one, that they preferred their own selection processes, and two, that they did not want differential grades to be linked to differential pay awards.

One argument against the use of graded assessment was the perception that grading assessments might 'water down' competency-based training and assessment, and that the system might revert to norm-referenced assessment (Hager et al. 1994; Thomson et al. 1996; Toohey et al. 1995). Other arguments against grading competency-based assessment can be categorised as essentially practical concerns. These include the perception that grading is cumbersome, expensive, complex and time-consuming and that additional professional development would be required (Hager et al. 1994; Rumsey 1997; Western Australian Dept of Training 1997).

Hager, Athanasou and Gonczi (1994) assert that it is possible to both support and oppose graded assessment, depending on the circumstances. They claim that the decision to grade or not to grade is ultimately one of policy, which should be based on clarification of the benefits to be gained and consideration of whether grading is the most appropriate way to achieve the stated benefits. Quirk (1995) also supports this view, stating that the benefits and purposes must be identified when making a decision whether or not to grade.

Issues arising from the literature

A range of issues arose from the literature and can be broadly categorised as:

- validity, reliability and consistency
- cross-sectoral concerns
- cost associated with graded assessment
- change.

These issues formed the basis of the study and informed the development of the research questions. The research instruments are given in appendix 2. Each of the issues is considered below.

Issues of validity, reliability and consistency

Range of practices and perceptions of inconsistency

It is clear from the literature that there is no common national policy regarding grading within Australia. While some states have developed, or are intending to develop grading models (WA, SA and NSW), others make it optional at the registered training organisation level (ACT and Vic), while other states have no grading requirements (Qld) (Griffin et al. 2001). Although many of the concerns related to graded assessment centre around the lack of consistency, Rumsey (1997), Smith (2000) and Schofield (2000) propose that the perception of inconsistency in competency-based assessments may be due to grading not being used. They contend that the obvious divergence that can be observed in the levels of performance of learners who have nevertheless all been assessed as 'competent' may contribute to this perception of inconsistency in assessment decisions. A number of researchers also comment on the quality of assessment instruments (Thomson et al. 1996; Wolf 1993) and lack of policy guidance at state or registered training organisation level for assessment instrument development (Griffin et al. 2001).

Responsibility for policy direction

From the literature reviewed there is no clear opinion as to who should be responsible for setting policy directions for grading. The degree and direction of policy is not extensively addressed by the literature; however, Thomson, Mathers and Quirk (1996), Rumsey (1997) and Griffin et al. (2000) outline the extent of peak training body involvement in providing policy regarding grading competency-based assessment.

The research findings of Thomson, Mathers and Quirk (1995) indicate that there is a diversity of views on who should decide whether or not to grade. In some instances it is considered that the national industry training advisory board system (reflecting the needs of employers and unions) should determine this; however, this conflicts with the perception of the TAFE system that it should also be responding to the needs of learners, local employers and higher education. Much of the literature implies, by their review of national or state training bodies, that the policy direction in terms of reporting should be set by the peak training body (Griffin et al. 2001; Peddie 1995; Rumsey 1997; Smith 2000).

Very little discussion in the literature relates to who decides what should be graded, how it should be graded and how many levels (of grades or performance levels) there should be. Rumsey (1997) indicates that the 'justification for graded assessment and reporting and the selection of appropriate criteria' should rest with the agencies responsible for the training packages. At this level of decision-making Peddie (1995) argues that the standards body developing the unit standards should decide these issues. The argument posed by Peddie (1995) is that these organisations are responsible for the analysis of the skills required and their experience and expectations of the learners that determine the standard of competence. However, Clayton (1995) clearly puts the responsibility at the registered training organisation level, especially with the teachers/trainers. Clayton (1995) furthers this discussion and states that, when determining when and where grading is appropriate, it is important to look at the module purpose, learning outcomes and proposed assessment strategy.

In terms of how many levels or grades, Wolf (1993, p.23) clearly states that 'the number of standards and cut-off points … depends on the inherent logic of the subject', that is, whether there are key, recognisable thresholds, and also 'on the context (the use to which it is being put)'. Clayton (1995) notes that any decision about the number of levels to be used in assessing must be done after considering the subject matter and the practicality of developing criteria for each level.

The introduction of the Australian Qualifications Framework has merged competency standards into course structure and the issuing of qualifications, which has left responsibility for these decisions unclear.

Inconsistency in ascribing and reporting graded assessment results

Although the variation in reporting methods has been explored in a number of publications (for example, Quirk 1995), Smith (2000) poses the notion that the grades being used by different trainers or assessors have been derived from different methodologies and are often reported in different ways. However, there has been little discussion amongst the literature regarding the inconsistency between the assessment methodology used and the reporting strategy. Hager, Athanasou and Gonczi (1994, p.69) note that 'the quantitative nature of measurements and scores can be misleading, and when assigned to a performance may have an artificial aspect'.

Appropriate assessment contexts and approaches for grading

There is consensus in the literature that grading in competency-based assessment does not have to apply to all assessments, modules/units, courses, situations and contexts. Peddie (1995 p.197) points out 'there is a distinction to be drawn between cases where the learning outcomes of a unit require mastery for the competence standard, and those units where this is not the case.

Furthermore, not all units (or learning outcomes) with the possibility of a better performance allow a ready identification of a standard of merit or excellence.'

Many researchers distinguish between off-the-job assessment, on-the-job assessments, workplace assessments, summative assessments, diagnostic assessments and formative assessments (Smith 2000; Clayton 1995; Strong 1995).

In addition, Peddie (1995), Rumsey (1997), Hager, Athanasou and Gonczi (1994), Hawke and Quirk (1996) and Griffin et al. (2001) provide various models or approaches to grading. However, Peddie (1995) provides an extensive discourse regarding the various factors for which a decision to grade or not to grade can be made. He provides guidance based on the consideration of whether all units allow for performance at a higher level than that required for competence, whether there are compulsory or optional units, and whether it is practicable to assess after the program has been completed.

Peddie (1995) goes on to provide further guidance about which approaches to grading are appropriate in which circumstances. He suggests that the best approach is where better performance can be validly and reliably identified using the same or similar assessment tasks and criteria. Where the possibility of better performance exists, but there is no valid and reliable way to identify a higher standard, then Peddie advocates assessment tasks that require both integration of the learned skills as well as transfer of these skills to one or more new contexts. He suggests that speed can be used as an additional factor only where experts perform the skills at similar levels to novices, but much faster, and asserts that the personal qualities of the learner are only appropriate when they are strictly relevant to the learning outcomes in the unit. However Peddie does not support the use of additional learning outcomes as an appropriate measure for merit in any circumstances (Peddie 1995, p.196).

The literature implies that there are situations where grading is not occurring or is not extensively used. Thomson, Mathers and Quirk (1995, p.vii) note that 'relatively little grading is applied in the workplace' and that 'grading practices are not common in company training programs' (p.1). In addition, Peddie (1995) argues that 'not allowing it [merit] in an assessment of recognition of prior learning' is not consistent with competency-based assessment and attaining competencies. Peddie (1995) argues that awarding merit on speed of completion confuses the use of this criterion with recognition of prior learning (RPL). In fact, within the New Zealand Qualifications Authority learners who present for recognition of prior learning and immediately perform at the credit level are not necessarily eligible for merit (1995, p.189).

Use of professional judgement

The role of professional judgement in competency-based assessment is discussed in a range of the literature (Clayton 1995; Gillis et al. 1999; Hager et al. 1994; Jones 1999; Smith 2000). Clearly 'quality assessment involves the collection and analysis of a sufficient quantity of evidence from a sufficient variety of sources in order to make a confident professional judgement regarding competence' (Smith 2000; p.25). Hager, Athanasou and Gonczi (1994) comment specifically that the process of making such judgements to infer overall competency is compatible with graded assessment. However, very little discussion in the literature surrounds whether professional judgements are more subjective when assessments are graded. Griffin et al. (2000) acknowledge the role of professional judgement both in the interpretation of the general descriptors of standards and of the levels of competence. Furthermore, Griffin et al. (2000, 2001) express a concern with the reliance on comparative terms (which are vague and relative) to make decisions between varying levels of grading performance (that is, the grading schema should not use comparative terms to distinguish varying levels of quality performance), and instead proposed a standards reference model for recognising varying levels of competence. (An overview of this approach is provided elsewhere in this report.) Griffin et al. (2001) stress that when comparative terms are used to define grading schema, the importance of consensus moderation is crucial to assist with promoting uniform interpretation of the schema.

Cross-sectoral concerns

There is almost universal agreement within the literature that one of the purposes of grading competency-based assessment is for selection—either for entry into higher education or into employment (Hager et al. 1993; Thomson et al. 1996; Dickson & Bloch 1999). Grayson et al. (2000, p.3) consider that there is a 'growing body of evidence that additional information and reporting are required by both students and employers, for a variety of reasons including credit transfer and articulation as well as employment opportunities' and that 'the higher education position is that competency-based training is not pedagogically supported but that graded assessment is'.

Grading is clearly seen as a facilitator of pathways into higher education. Hawke and Quirk (1996, p.5) note that 'most universities regard the introduction of ungraded assessment ... as disadvantaging numbers of applicants'. They state that universities do not see it as 'their responsibility to apply further resources in seeking additional information ... most would prefer the administratively simple solution of VET systems providing graded results for all modules'. However, there is no consensus as to whether grading should be introduced for just these purposes. Carnegie (2000, p.iv) expresses concern and notes that any changes in current reporting arrangements should be driven by factors within VET, rather than as a means of addressing the admissions issue.

Issues of costs

Of particular concern across some of the literature is the cost associated with the development, implementation and maintenance of a grading system (Grayson et al. 2000; Griffin et al. 2000; Rumsey 1997; Strong 1995). It could be assumed that any supplementary reporting beyond the minimum requirements creates a potential cost. Costs can be considered to relate to assessment instrument development, development of the grading schema (which incorporates the development of additional criteria, marking schemas and/or profiles), maintenance of the grading schema and professional development of assessors (Grayson et al. 2000; Griffin et al. 2000), assessment instrument developers and/or unit developers.

Issues of change

The literature is, in general, consistent in the discussion over time as to who or what are the drivers for grading—employers, students, universities, parents and students (Clayton 1995; Rumsey 1997; Van de Graaf 1990). However, there are conflicting findings in relation to employers—whether they do or don't want grading for selection purposes (Wooden & Harding 1997; Dickson & Bloch 1999; WADTE 2001). Given the changes brought about by the introduction of the Australian Qualifications Framework and introduction of VET-in-schools programs, or what Griffin et al. (2000, 2001) term the merging of the selection and recognition paradigms, the identification of who or what are the principal drivers is an area for further research.

Methodology

Population and sample

A total of approximately 120 stakeholders was included in the research. Two focus groups were held to seek guidance on the evidence to be gathered during the research, one through a face-to-face meeting with Victorian stakeholder representatives, and one by teleconference with interstate counterparts. The composition of the focus groups was broader than that of the survey population, incorporating industry training advisory bodies, Year 12 examination boards, secondary teacher organisations, school parent associations and the Australian Vice Chancellors' Committee, in addition to the representatives from the survey population of registered training organisations, learners, employers, unions, universities, state training authorities and the Australian National Training Authority. As the purpose of the focus groups was to seek guidance on the direction and scope of the study, it was considered that input from all of these groups would help to ensure that the perspectives of a broad range of interest groups were represented.

Five states and one territory were covered in the initial stages of the study—Western Australia, South Australia, Victoria, the Australian Capital Territory, New South Wales and Queensland. These locations were selected because they were identified in the literature as using graded assessment in VET. During later stages of the research, where feedback and validation of the research was sought, all states and territories were included.

In identifying the parameters of the population of key stakeholder groups, the range of variables likely to impact on the drivers and practices of graded assessment were considered. Thus for example, the registered training organisation sample was stratified to incorporate TAFE institutes, commercial private providers, group training companies, community-based providers, and enterprise-based providers. Universities included both dual sector and stand-alone institutions; small, medium and large employers were interviewed, as were both past and present students. Metropolitan, rural, regional and remote locations were also considered in the study.

A census survey was conducted of the state training authorities in each of the states included in the study. For the remainder of the stakeholder groups, a sample survey largely employing snowball sampling was undertaken. As the study did not attempt to ascertain the extent of registered training organisations using graded assessment, but rather to examine the various approaches to grading currently in use in the national training system, random sampling of these organisations was considered inappropriate. An attempt was made to target as many registered training organisations as possible that use graded assessment.

Research methods

Data were gathered through focus groups, telephone and face-to-face semi-structured interviews and both quantitative and qualitative feedback on an issues paper, which served to validate the earlier research findings.

The information to be gathered in the semi-structured interviews was determined primarily through an analysis of issues in the literature, and any others that focus group members determined should be included. Interview schedules were developed to address the identified issues.

Both the list of identified issues and draft interview schedules were circulated to focus group participants to confirm that these were the appropriate areas for investigation, to incorporate any additional areas identified by those stakeholder representatives, and to confirm that the draft interview schedules would elicit the required information. Once the focus groups had endorsed the areas of investigation and suggested changes made to the interview schedules, the survey was piloted, amended slightly and conducted.

Although several questions were common to all interviewees, four separate interview schedules were developed so that different perspectives could be explored with different stakeholders. There was one schedule for registered training organisations, one for students, one for student destination organisations such as universities and employers, and one for peak organisations such as unions and state training authorities. The schedules are set out in appendix 2.

Analysis of the data

While interview questions were asked in an open-ended way, responses were recorded using lists of common response items, combined with handwritten recording of any additional information.

The common response items were coded using nominal scales to facilitate ease of analysis. Where possible, the additional qualitative information was aggregated in common themes. These themes were then analysed in an attempt to determine whether there were common variables producing them. Where no common variables were discernible, then these were treated as illustrations of particular viewpoints.

Validation of the research

After a preliminary analysis of the data, an issues paper was written and circulated to those who had participated in the research, to delegates at a national conference on graded assessment held in Melbourne in May 2001, and through assessor networks in each state and territory. The issues paper contained a proposed draft framework for guiding grading practices nationally, on which respondents were asked to provide feedback and comment. The initial response rate to the issues paper was low, however support for the proposed draft framework was overwhelmingly positive. The issues paper was then distributed to targeted assessment experts and policy-makers for comment. They were also largely supportive of the draft framework.

Respondents to the issues paper were asked to provide qualitative comments in addition to the structured feedback that was sought. Both the structured responses and the qualitative feedback to the issues paper informed the further development of the framework and recommendations arising from the research.

Strengths and limitations of the chosen methodology

The focus of the research was the exploration of stakeholder responses to the issues identified in the literature and from the focus groups. Although over 120 stakeholders were included in the research, the stratification of the sample to cover the range of key variables that would impact on stakeholder viewpoints meant that the sample sizes of stakeholders in some categories became relatively small. Furthermore, while a total of 49 interviews were conducted with registered training organisations, the number of these organisations and the range of grading practices represented in each interview varied significantly, confounding a straightforward statistical analysis of the data.

The researchers had originally hoped that the data would show a picture of which industry areas, qualification levels, es etc. were most commonly using graded assessment. In the event however, there were very few registered training organisations in which anyone had an overview of the

grading practices used throughout the organisation. For the most part respondents could only talk about the way grading was used in their own course area or department. Thus no valid overview of the extent of grading practices could be established from the study.

However the information gathered from the study provides excellent insight into the issues surrounding grading competency-based assessment and provides snapshots of a range of practices, but cannot claim to represent a comprehensive picture of the nature or extent of graded assessn. nt throughout the national training system.

Most of the information gathered in the research was taken from the semi-structured interviews. The detail in these interviews made them a time-consuming exercise both for researchers and respondents, but there was a real sense of professional development occurring as respondents considered their view about the various issues in graded assessment, some for the first time in a conscious way. The later, more considered responses to the issues paper put forward by some of the original respondents confirmed this professional development aspect. There were also opportunities for registered training organisations to respond to the questions by email. Time boxes completed on these responses suggested that it was a very much more time-efficient method of gathering data, but the information-rich qualitative data was less forthcoming when the opportunity to talk through the issues was absent.

Findings

Overview

In general, it has been difficult to gain an overview of grading practices. However, the research has identified that 'good' practice in competency-based assessment is still neither fully understood nor universally implemented across the VET sector. There has been no identified consistent approach across the industry sectors regarding the degree of support for grading. In terms of registered training organisations interviewed, the research findings indicate that various practices are employed across program areas inside and outside policy guidelines. Individuals interviewed could only speak for the most part about grading practices within their own program area. In instances where registered training organisations have a specifically mandated assessment manager, there were broader discussions concerning general practices across their organisation. In these instances, all aspects of grading practices frequently varied from program to program.

The research findings are discussed within the categories determined by the literature review (see pp.13-19):

- validity, reliability and consistency
- cross-sectoral concerns
- cost associated with graded assessment
- change.

Issues of validity, reliability and consistency

Range of practices and perceptions of inconsistency

The findings from the current study again confirmed the wide variety of grading practices across Australia, across states, across providers within states as well as within providers across course areas and qualification levels. Some of the reasons for variation in practices that came out of the research include:

- The Australian National Training Authority policy is silent on grading.
- State and/or territory training authorities' policies vary from strong support for grading with the state having funded development of the model, through to the decision to grade being viewed as within individual registered training organisation jurisdiction, and to not supporting grading.
- Specific factors related to qualifications, such as the extent of industry support, the direction provided by the training package or curriculum document, the desire to respond to local conditions (for example, demand by local employers and international students or using grading as a competitive edge for commercial advantage) account for some variation.

Only some of the models identified in the research, namely the criterion-referenced approaches, were considered compatible with competency-based assessment. The literature identifies two

approaches to graded assessment: those that involve the higher achievement of the competencies being assessed, where the criteria for grading are directly related to the competency standards, and those where grading is based on the achievement of additional criteria, which are not necessarily explicit in the competencies themselves (Peddie 1993; Hawke & Quirk 1996). While most approaches identified in the research followed one or other of these models, in some cases this distinction was difficult to make, as for example where the Mayer key competencies formed the basis for the grading criteria. While embedded in the standards, these competencies are not necessarily explicit.

Models identified in the research that were considered incompatible with competency-based assessment, were those in which the notion of 'progress towards' competency is implied. This included the allocation of percentage marks, and those approaches that involved some form of norm-referencing, for example either through direct ranking of learners against one another or where statistical manipulations of distribution were employed to create normative bell curves. Of particular concern was one model where learners were initially allocated 100% then had marks deducted for incorrect or incomplete responses to assessment tasks. Considerable consternation was expressed by a number of respondents that these types of approaches to grading were undermining the national competency-based assessment system.

Of the registered training organisations interviewed, approximately half had implemented a model of graded assessment. Of those which had not implemented graded assessment, the majority indicated that they had no plans to implement such a system. The remainder of these had undertaken some form of research and/or discussions regarding the intention to implement graded assessment. Graded assessment within registered training organisations was mainly occurring either across all programs or within specific programs/industry areas. Few of the organisations had implemented a graded assessment system according to Australian Qualifications Framework level, although some indicated that they only graded higher level qualifications. Of the registered training organisations that had implemented a grading system, most had made this mandatory within whichever programs had been selected as appropriate for grading, whereas some had made graded assessment optional upon request by the learner. Overwhelmingly registered training organisations were applying graded assessment at unit, module or 'cluster' (that is, a group of units or modules) level rather than at course level. In the majority of instances evidence was collected over time throughout the duration of the course, rather than based on a single assessment event occurring towards the end or after the program.

The dimensions of learning to which grading was applied included underpinning knowledge, demonstration of skills, transferability to other contexts, attitudinal development and on-the-job application. If more than one dimension of learning was assessed, the majority of registered training organisations combined assessments to ascribe a single grade. In implementing graded assessment, a number of registered training organisations conducted formalised professional development activities for assessors, while others informally inducted assessors using some form of mentoring process. The provision of guidelines and sample exemplars of assessment tools were other important strategies for enhancing the validity and consistency of graded assessment. Moderation processes (internal and external) were utilised in a large proportion of registered training organisations to establish and monitor the validity of the grading schemas.

Registered training organisations (which had implemented graded assessment) had varied perceptions as to the major strengths of graded assessment, which included providing consistency over program areas, less assessor subjectivity, providing more information to learners, providing articulation pathways, increased learner motivation and self-esteem, and addressing concerns by clients or stakeholders. However, the weaknesses perceived by respondents centred around concerns about the lack of consistency, assessor subjectivity, confusion with norm-referencing, cost in terms of time, understanding of assessors and an inadequate moderation system.

The findings indicate that both peak bodies and student destination respondents were generally dissatisfied with the consistency and validity of current grading practices used by registered training organisations, especially at a systemic level. The majority of peak bodies considered that graded

assessment did not meet stakeholder needs and, in fact, labelled grading practices as 'inconsistent', 'incoherent' and 'often misunderstood'. Student destination respondents were more mixed in their response as to whether they considered that the current arrangements for using and reporting graded assessment met their needs. Mechanisms to enhance consistency and validity proposed by peak body and student destination respondents centred on external assessments, moderation and validation processes, assessor networks and implementing state policy regarding graded assessment.

In general, learner respondents expressed satisfaction with grading. Learners overwhelmingly considered that the current arrangements of reporting graded assessment met their needs. Furthermore, they were happy with the way grades were allocated. Suggested improvements to the way graded assessment is conducted and reported, however, related to learners indicating the need for more information on how to meet the criteria, as well as changing the way graded assessment outcomes are reported.

Inconsistencies in graded assessment results

During the research process a number of variations were identified relating to the registered training organisation reporting frameworks being used for grading, for example:

- *Level of reporting*, including ascribing grades to individual units or modules, clusters of units or modules or at overall course level.
- *Range of reporting models*, including letter grades such as A, B, C etc.; word descriptors such as credit, distinction, high distinction or competent with merit, competent with distinction; percentage marks; or profile descriptions using either prescribed or free profile formulae, with reporting ranging from 2 to 6 levels of performance.
- *Range of practices* for combining assessments to ascribe a single grade. These may include a number of assessment tasks for a number of units, assessments conducted in a range of contexts, such as on and off the job, or integrated or capstone assessments. Practices include using an assessment matrix approach relying on the overall professional judgement of the teacher or assessor; averaging of marks to provide a final mark; relative weightings assigned to assessment tasks which then contribute a commensurate amount to the overall mark; grade weightings, where, for example, out of six assessment pieces, four would need to be assessed as a specific grade for that to be assigned as the final grade; grades allocated through a moderation process; and statistical standardisation processes with standard deviation distribution.
- *Transparency of reporting* ranged from letter or numerical grades with no indication of how they have been allocated, word descriptor with or without the percentage mark that it represents, through to publicly available criteria for grading either in student handbooks or printed on the back of the statement of results. However the majority of registered training organisations did not have descriptors explaining the grades within the reporting structure.

Responsibility for policy direction

The research provided some insight into current practice regarding the extent and direction of graded assessment policy. A limited number of registered training organisations which had implemented graded assessment had no policies in place to inform the development and implementation of graded assessment within the organisation. A few indicated that policies existed either at their organisational level or at individual program or department level. These policies or guidelines which dealt with the development of grading schemas were essentially related to criteria/profile descriptors and marking schemas/rubrics. Within the majority of registered training organisations, individual program managers or individual teachers/assessors were responsible for developing polices or guidelines on grading.

Student destination respondents had no graded assessment policies in place and approximately half of the peak bodies indicated a policy in relation to grading in VET, with the Australian National Training Authority citing the stance of the dichotomous framework of competent/not yet competent. Most of the peak bodies did not have guidelines in place for ensuring the validity of the models or approaches to grading used by registered training organisations within their jurisdiction. A large number of peak bodies and student destination respondents indicated no preferred model or approach to graded assessment.

One key question posed in the research was who should be responsible for making key decisions about grading. These decisions include whether to grade, what should be graded, how it should be graded, how many levels of competency development should be assessed and reported, and for what purposes grading may be used. The findings indicated that equal numbers of registered training organisations considered either that it should be the organisation which is responsible for making these key decisions, or that industry training advisory body/training package developers should be responsible. A smaller number of registered training organisations considered that peak bodies (that is, state and/or territory training authorities and the Australian National Training Authority) should be responsible for determining or leading policy. This mix of responses across these possibilities was also reflected in the responses of the peak bodies, which, in some instances, considered that it was important that the process was a collaborative one. Student destination sites (that is, employers and higher education providers) contributed little to this discussion. In general, responses were mixed regarding who should have responsibility for providing guidelines for developing the actual grading schema. However, the Australian National Training Authority and industry training advisory body/training package developers were frequently cited. In terms of maintaining the grading schema however, the responsibility tended to be seen as residing at registered training organisation level.

In terms of who currently makes the key decisions regarding grading, the findings indicated that, within the registered training organisations interviewed which were using graded assessment, the program and/or department managers at registered training organisation level were generally responsible for this. Other possibilities included external or internal policy/guidelines, training package documentation, industry, academic councils/committees and state authorities.

Most registered training organisations cited industry training advisory body/training package developers or teams, comprising program managers and teachers/assessors, as being largely responsible for the development, maintenance and dissemination of the grading schemas. Strategies in place for carrying out these functions included program team development and review, articles in newsletters, professional development activities, as well as unit/module review processes. Respondents (registered training organisations, student destination sites and peak bodies) were also asked what they considered to be the key consideration for making these decisions about grading. An overwhelming concern was expressed regarding the need for consistency not just over qualifications but also across states.

Appropriate assessment contexts for grading

The research confirmed that grading for the most part takes place off the job. Only one of the registered training organisations interviewed routinely offered grading for recognition of prior learning assessments, and less than half of those who used graded assessment graded on-the-job assessments. There were a number of reasons cited for not grading recognition of prior learning. These included: it was considered too hard or too costly (a commonly expressed view was that recognition of prior learning is already too difficult without adding the complexity of grading to the process); applicants may be disadvantaged by not being able to assemble the best evidence; grading was applied to the learning that occurs in a program, not the outcomes, which automatically excludes recognition of prior learning. Also various internal arrangements precluded recognition of prior learning from grading, such as policy stipulations or perceived unfairness in the conferring of awards. A number of respondents expressed the view that they could not see the point in grading recognition of prior learning as it was for exemption purposes, or that the assessor must see performance to allocate a grade or that it is not possible to grade supplementary evidence. A

possible model of negotiating some sort of project was put forward by one registered training organisation to accommodate learners who may require a grading for recognition of prior learning.

A number of the reasons provided by registered training organisation respondents for not grading on-the-job assessments seemed to relate to the reduction in control over assessment in the workplace. For example, there was concern that learners may be disadvantaged if they were to fail in their assessment due to circumstances specific to the company at a particular time. Some respondents were reluctant to hand over the task of allocating grades to workplace assessors who were not in the employ of the registered training organisation, and they were reluctant to intrude in the workplace. Others felt that it was not necessary to grade on the job.

Degree of professional judgement

In general, the perception that the use of grading increased the subjectivity of the assessors was not evident in registered training organisation responses. The majority of their responses considered that there was no change in the subjectivity of grading judgements over competent/not yet competent decisions—all assessment decisions require a degree of professional judgement, and the grading was considered no different. Of the minority of respondents who did consider that grading has an impact on the subjectivity of the assessment decision, opinion was equally divided as to whether graded assessments were more or less subjective. A number of respondents considered that either grading can be less subjective or can produce better assessment judgements due to the additional care needed to determine the correct grade level. However, it was certainly acknowledged that grading makes assessment more complex, and the need for validation strategies and exemplar assessment tools was stressed.

Cross-sectoral concerns

The majority of registered training organisations and student destination respondents viewed graded assessment as essentially being used for course selection and employment recruitment and selection opportunities. In addition, registered training organisations cited other key mechanisms for articulation as being local articulation arrangements with universities, partnerships with other VET providers and partnerships with industry. For internal purposes half of the registered training organisations used graded assessment for award recognition purposes. Other reasons cited were for internal course selection, learner motivation, to guide teaching and learning, career development and for pre-employment courses for selection into industry courses.

Registered training organisations using graded assessment considered that grading is equally or more important with other pathways' mechanisms, such as articulation or partnership arrangements. Grading was seen to be complementary, used for the purpose of selection, whereas articulation is used for exemption purposes. Grading was also seen to fill the gaps where partnership or articulation arrangements do not exist. Furthermore, registered training organisations considered that lack of graded assessment disadvantaged learners in terms of course selection in further and/or higher education and in terms of employment selection processes.

Student destination respondents overwhelmingly considered graded assessment systems as being equally or more important than other pathway mechanisms. However the majority of peak body respondents (that is, the Australian National Training Authority, state and/or territory training authorities and unions) considered that other pathways' mechanisms were more important especially in terms of resource expenditure. Learners overwhelmingly cited entry into employment and/or further study as being helped by graded assessment. The concern expressed in the literature (Carnegie 2000) and echoed by some focus group participants about possible undue influence by external factors on the VET sector was not widely reflected in the field, although the Australian National Training Authority, the state training authorities and unions were almost evenly divided in their perceptions. While the overwhelming majority of registered training organisation and peak body respondents acknowledged the influence of these external factors, the general response was

that they were not undue. In addition, responses indicated that there was also a number of internal factors of influence, such as the demand by learners themselves for feedback and motivational purposes. Several respondents commented to the effect that VET does not exist as an end in itself—that its function is to serve and facilitate pathways into the world of work and further study. Student destination site respondents provided little input into this discussion.

Equity in facilitating cross-sectoral pathways

Another often cited purpose for graded assessment was the registered training organisation's desire not to disadvantage exiting learners in further education or employment. There is considerable discussion in the literature about the conflicting relative advantages of graded assessment between high- and low-achieving learners, which was echoed by several respondents in the research. While it was acknowledged that grading generally enhances the motivation of high-achieving learners, concern was expressed about the possible detrimental effects that receiving a mediocre or worse result can have on less able students, both in terms of their motivation and their prospects for selection into further education and employment.

In order to canvass the views of students themselves on this issue, learners of mixed ability in a range of programs were interviewed, including participants in an adult literacy program. Responses were mixed, but many of those learners traditionally considered to be disadvantaged in the education system indicated that they preferred graded assessment, citing such reasons as more informed feedback and improved motivation. While one student stated that 'grades are scary' and that a poor grade would destroy incentive to the point of withdrawing from the course, another took the view that graded assessment 'doesn't mean greater levels of failure, [but] means greater degrees of passing'. It is important to note that the model of graded assessment to which students were referring had a significant impact on their views about its perceived equity. The first comment refers to a model of grading where grades were allocated on the basis of percentages, including below the 'competent' level, while the second refers to a model where grading only applied once competence had been achieved. In any event, students overwhelmingly demonstrated the perception that entry into employment and/or further study is helped by graded assessment.

Issues of cost

Although views were mixed about the relative cost of grading, most respondents acknowledge that grading is potentially expensive. In general, registered training organisations considered the cost of set-up, design, application and maintenance contributed equally to costs related to graded assessment. On the other hand, the peak bodies considered that the cost would lie essentially in the set-up and maintenance stages of the graded assessment system. The most common areas cited by registered training organisations where additional costs were recognised included the cost in additional time taken to apply grading criteria, the cost in time to develop criteria, the cost in time for validation processes (and money for providers in remote regions where travel is a major cost factor), and the cost in time and money for professional development, again especially for providers in remote areas.

The cost of reporting and recording grades was cited as a major concern for registered training organisations. Some current software systems geared to dichotomous reporting do not have the capacity to accommodate grades, a situation which necessitates supplementary reporting by hand of graded results. Alternatively, the cost of upgrading the software capacity would also prove expensive.

Some respondents asserted that it does not cost any more to grade if assessment is already being conducted well—that is, if adequate feedback is already being given to learners then there is no additional cost.

Few attempts to calculate the additional cost of grading were uncovered by the research. One registered training organisation had calculated the additional cost of grading at one additional hour

per student per module. A common response was that providers did not want to know the additional cost. However as part of the evaluation of the Western Australian trial, registered training organisations were asked to calculate the additional time taken for grading. The results showed an average of an additional 25% to the cost. Suggestions were that the cost could even have been as much as 30% to 40% higher, but it was acknowledged that this was not necessarily an accurate overall figure, as implementing a new system of grading for the first time would take considerably longer. The trial also uncovered problems with assessment that were not grading-related but which grading identified, and which increased the expense. Assumptions were made that 'good practice' in competency-based assessment was already occurring, and that graded assessment could build on such practice. In the event however, the trial revealed that 'good practice' was not widespread. This translated into more time being spent both in up-skilling staff and in implementing the graded assessment system than would have been necessary if competency-based assessment had been more thoroughly understood and practised.

It was the majority view of registered training organisations using grading and of peak bodies that the benefits clearly outweighed the costs because of the overwhelming client satisfaction (against reporting that the costs outweigh the benefits).

Student destination respondents considered that the Australian National Training Authority or end users, such as universities or employers, should meet the cost of grading. the Australian National Training Authority's view is that grading should be funded by registered training organisations or a combination of states, registered training organisations and end-users. The state and/or territory training authorities considered that graded assessment should be funded by the Australian National Training Authority (three of the five state training authorities interviewed), a combination of the Australian National Training Authority, the states and the registered training organisations (one of the five interviewed) or by a combination of savings from existing state funds and end-user contributions (also one of the five interviewed).

When asked what they would be prepared to give up to fund grading if it became obligatory to grade, most registered training organisation respondents indicated that grading would have to be an extra.

Issues of change

The research indicated that registered training organisations perceived equal demand for graded assessments from learners and employers, with a smaller demand from universities. The majority of registered training organisations reported no significant change in the demand for grading. Of those who indicated an increase in demand over the past five years, the introduction of training packages and the subsequent dissatisfaction of the competent/not yet competent reporting was cited as the most common factor driving up demand. A small number of respondents indicated that the demand for grading had dropped, and the most common reasons for this were deemed to be employers and other stakeholders having grown used to the competent/not yet competent reporting of results. Changes in grading practices themselves for providers operating outside of current statewide trials in Western Australia and Queensland were for the most part deemed to be evolutionary in nature, with a trend towards tighter quality control.

The majority of student destination respondents also reported that there was no significant change in demand for graded assessment, however peak bodies were mixed in their perceptions with some indicating less demand over the last five years and others stating that there was no change in demand. The respondents who considered that there was an increase in demand cited the major reasons as VET-in-schools activity and learner familiarity with and expectation of having assessment results graded.

The literature has recorded isolated instances of industry perceptions of the potential for graded results to be tied to remuneration or promotion. Some participants in the focus groups also expressed disquiet about the implications that graded assessment might have for industrial

relations. In the event however, the majority of peak bodies and student destination respondents considered that there was no change in terms of any industrial relations implications associated with graded assessment. registered training organisations were almost evenly divided in their perceptions of whether or not industrial relations issues have changed over the last five years. However, these issues related to conditions of teachers and assessors within registered training organisations, the implications of graded assessment on teacher/assessor workloads, copyright issues of materials used in moderation and pay scales and enterprise bargaining, rather than any change in the implications of graded assessment results for learners in the workplace.

Discussion

Graded assessment as a policy decision

Hager, Athanasou and Gonczi (1994) identify the decision to grade or not to grade as one of policy, which, according to the literature should be based on considerations of:

- a clear indication of the benefits to be gained
- whether grading is the most appropriate way to achieve the stated benefits
- a clear purpose and meaning for grading
- a clear identification of levels of performance inherent in the standards
- practical considerations.

(Hager et al. 1994; Wolf 1993; Quirk 1995)

Given that graded assessment is widespread across the VET sector, and that the research shows the grading practices employed by registered training organisations are not only widely divergent but that some practices seriously undermine the integrity of the national competency-based training system, then it is time for graded assessment to be addressed as a national policy issue.

Proposed framework for grading

The key objective of the Australian Quality Training Framework is to provide a nationally consistent, high quality vocational education and training system. It provides key standards to which registered training organisations must comply. As such it provides registered training organisations and assessors with criteria and guidance for conducting assessments. If grading is viewed as compatible with competency-based assessment it therefore comes under this framework and the key principles of validity, reliability, fairness and flexibility should still apply. However, given the concerns expressed in both recent literature (Smith 2000) and the findings of this study, the practice of grading may need to be governed by additional principles which provide more specific guidance, and which complement the principles that apply to assessment more generally.

This study revealed an increased concern for consistency across states and territories and the need to promote confidence in assessment, especially graded assessments. Consequently there is a need to provide national guidance on grading that still enables the states and territories to operate this matter in their own way and allows sufficient autonomy at the registered training organisation level to respond to client needs and to reflect current and local contexts.

Proposals

- Key national principles should be developed that are complementary to the principles of assessment (that is, validity, reliability, flexibility and fairness) that will underpin and guide graded assessment policy and practice of states and territories as well as individual registered training organisations and assessors.

- In states where statewide consistency is of primary concern, each state and territory should develop guidelines reflecting their position on graded assessment that are in line with the overarching national principles. The state and/or territory training authorities that support grading can then provide registered training organisations and assessors with greater guidance in relation to the implementation of an assessment and reporting framework that supports grading, yet still contributes to the enhancement of national consistency through compliance with the national principles.

- Registered training organisations should have the autonomy to develop local policies, procedures and guidelines to support their assessors in implementing graded assessment. These policies, procedures and guidelines would need to comply with any state guidelines and thereby be consistent with the national principles. This is not to say that grading must apply, but rather that if grading is considered appropriate, then policies, procedures and guidelines should conform to these national principles for graded assessment.

National assessment principles and graded assessment

The existing national assessment principles were examined to determine how they apply to the graded assessment context and to identify any deficiencies or gaps that these principles may leave, or any areas where the national assessment principles may be antithetical to graded assessment. It was not always easy to make a judgement about some components of assessment that are already implied in the national system (either explicitly or implicitly) and therefore do not need reiterating in the graded assessment context, and those aspects which, although implied are not well understood and implemented.

Valid

Validity is critical to any assessment context, graded or ungraded. However, it is important to keep in mind that the definition of validity adopted through the national assessment principles differs from that offered earlier in this report. There are at least two areas where validity takes on a critical dimension in the graded assessment context. The first is not a theoretical dimension, but rather one of perception and practice. Considerable concern was expressed both in the literature and in the research that graded assessment could undermine the competency-based national training system by 'going back to the old system' of norm-referenced assessment and/or the allocation of percentages or marks. Indeed, the research showed that in a number of instances, practitioners displayed some understanding of a competency-based approach requiring a competent/not yet competent judgement, but this sat alongside non-competency-based approaches to grading within the same unit of competency. That is to say there is not a widespread understanding in the VET sector of how to apply competency-based or criterion-referenced approaches to grading. Therefore it is argued that even though competency-based assessment is fundamental to the national training system, additional principles are required to underpin and enhance the validity of graded assessment approaches within that competency-based system and to rule out approaches that are not compatible with competency-based assessment.

The second aspect where the principle of validity requires additional support is in the area of transparency, transparency in terms of the purpose of the assessment, the way in which the evidence of competence is interpreted, as well as how the grades are determined and reported. Competency standards are readily and publicly available, a situation which enables any stakeholder to ascertain the benchmarks against which a learner has been assessed. Where reporting is ungraded, then it is clear what the learner has been assessed against in order to gain a 'competent' result, which in turn facilitates valid use of the assessment results. However, such transparency in terms of the assessment purpose as well as the framework in which the evidence is interpreted—that is, 'cut-off' levels of performance of the grading schema or criteria—is not automatically guaranteed in the context of graded assessment. The research shows that many registered training organisations either do not publish the criteria they use to ascribe grades at all, or do not print

them on the same recognition document as that of the assessment results. Therefore, without transparency, invalid inferences can be drawn from the graded assessment result. This phenomenon was reported in the research, where employment selection was based on grades without reference to the basis on which the grades had been allocated. Employers subsequently complained about the lack of predictive validity of the graded assessment outcome.-

Reliable

Reliability, in its concern with consistency and elimination of error clearly applies in the graded assessment context. Indeed, as Professor Patrick Griffin in a personal communication providing feedback on the issues paper points out, 'the opportunity for error increases simply because the number of differentiated classifications increases and this in turn demands a greater level of accuracy in the observation'. While agreeing with the contention that there are increased risks of inaccuracy when assigning multiple grades, Quirk (1995) however, quotes a paradox identified by Cresswell (1986 in Quirk 1995) whereby the severity of misclassification falls in proportion to the rise in the number of grades, and conversely, the fewer the grades, the more severe each misclassification becomes.

Nevertheless, given the increased opportunity for error, much of the literature (for example Griffin et al. 2001; Smith 2000; WADTE 1999) and many of the research respondents suggested that moderation is critical in the graded assessment context to reduce error. Consideration was given to whether the national principle 'reliable' should be supplemented by a principle stipulating that graded assessment be supported by moderation. Other stakeholders, however, were strongly of the view that moderation is only one of a range of validation processes and should not be mandated. The new Australian Quality Training Framework stipulates in Standard 9.2 that registered training organisations must validate assessment strategies by 'reviewing, comparing and evaluating the assessment processes, tools and evidence contributing to judgements made by a range of assessors against the same competency standards, at least annually.' (the Australian National Training Authority 2001, p.19). The document notes that 'these may be internal processes with stakeholder involvement or external validations with other providers and/or stakeholders' (p.19). It was considered therefore that the Australian Quality Training Framework would adequately provide the policy and implementation framework that will allow the moderation question to be addressed.

Flexible

Flexibility in assessment is intended to allow for on and off-the-job assessment at mutually convenient times and situations. It should also provide for the recognition of competencies no matter when, where or how they were acquired, including recognition of prior learning. The research shows that this is not currently the practice in the sector, with relatively minimal on-the-job grading available and almost non-existent graded recognition of prior learning. However, the fact that grading is not universally available in the on-the-job and recognition of prior learning contexts for those competencies where it is available off the job, does not in itself constitute a gap in the principle of flexibility; rather, the principle is not being fully implemented in the graded assessment context.

Fair

A fair assessment does not disadvantage any person and takes into account the characteristics, including special needs of the person being assessed. A considerable proportion of VET stakeholders are of the view that any form of graded assessment constitutes a breach of this principle, since one of the key purposes for which graded assessment is used is to differentiate learners, usually for the purpose of selection into higher education and/or employment. (Note however, that the single grade of competent/not competent also differentiates learners.) Learners who perform at a lower level may be disadvantaged in this process. However, assessment literature on 'fairness' raises the issue that those who learn at a higher level equally consider themselves disadvantaged by the absence of grades in that their efforts and achievements are not reflected in

the reporting and employment contexts. This view was echoed by some of the student respondents in the current study. The view of this study has consistently been the acknowledgement that graded assessment does take place. It is therefore useful to discuss how the principle of fairness can apply in the graded assessment context.

There are two aspects to this principle that are specific to the graded assessment context. One is the question of whether the reporting of graded assessment results should be optional for learners. As discussed below under the principle 'discretionary', high achievers may perceive themselves to be disadvantaged by ungraded results, whereas lower achievers may be more advantaged by a competent/not yet competent result. The principle of fairness suggests that no candidate should be disadvantaged through the assessment process. It could therefore be argued that learners should be informed of the implications of graded and ungraded results and given the option to choose which they wanted. The second component relating to fairness in the graded assessment context is the need for the grading schema/criteria to be made available to the learners prior to assessment taking place. Again this is an issue of transparency.

Conclusion

Thus these principles of assessment (especially validity and reliability) are particularly pertinent and take on greater importance when applied to graded competency-based assessment. The application of graded assessment and the integrity of the credentials within the framework of the Australian Qualifications Framework depends on the validity of the assessment judgements and the overriding concern of whether assessors will similarly grade performance. To enhance validity, policy-makers should be concerned with the extent to which there are consistent or common understandings in the interpretation and application of graded assessment (including evidence, grading schema and judgement within and across assessors, from learner to learner, and from context to context) as well as in the integrity of the credential.

Proposed principles for graded assessment

In response to the identification of the gaps and discrepancies in the application of the national assessment principles outlined above, four overarching principles in relation to graded assessment have been derived, not only from the literature but also from current practice and the findings from the research.

Compatibility with the spirit of competency-based assessment is the overarching factor to apply to the use of graded assessment. As the national training system is competency-based, anything not compatible with this system potentially compromises its integrity. Given that registered training organisations within the Australian VET sector are registered to provide competency-based training and/or assessment, and that qualifications under the Australian Qualifications Framework are based on this, it could be argued that articulating such a requirement is redundant. However findings from the research show that many current grading practices in the national training system are clearly not compatible with competency-based assessment; hence the need for explicit principles that will strengthen and support this requirement.

The principles for graded assessment

- criterion-referenced
- applied once competence is determined
- transparent
- discretionary.

Criterion-referenced

This is the foundation principle and a key feature of competency-based assessment. Competency-based assessment and criterion-referencing are intrinsically linked in the Australian VET sector. While norm-referencing supposedly reports how well someone performs relative to other people, criterion-referenced assessments on the other hand report on performance in relation to an externally defined domain or criteria. However this does not mean that the result is necessarily dichotomous, such as competent/not yet competent (Wolf 1993). It is therefore possible to consider the concept of grading in terms of levels of performance relative to defined criteria. Some common examples of of grading criteria include speed of completing a task, measures of creativity, the amount of supervision required and the quality of the work completed. Hence, grading must only occur if it is criterion-referenced as opposed to norm-referenced; that is, if it is to be considered compatible with competency-based assessment, candidates are not compared with each other to achieve the grade (Quirk 1995).

Applied once competence is determined

Criterion-referenced assessments do produce a distribution of performance in the same way as other more traditional methods of testing (Wolf 1993). A single cut-off point is one way to partition this distribution. Throughout the research there were examples of assessors using alphanumerical marks or percentages; these constitute multiple partitions. However, it is proposed that grades should not be ascribed in terms of percentages or marks, as such a methodology implies that 100% or 'full marks' is the ideal and anything less is 'progress towards the ideal'.

Moreover, if 100% equals competent, then there is no room for differentiating levels of performance above that of competent. If on the other the hand competent is set arbitrarily at 50% or at 75%, this undermines the notion of competence. One identified model of grading in practice in the VET sector in Australia allocates percentages after competence has been determined, and put simply, 50% is allocated to the 'cut-off' point between competent and not yet competent. However, the use of 50% to denote the cut-off between competent and not competent creates confusion in two ways. Firstly, as confirmed in both the literature and in the current study, it confuses the practice of some VET teachers who tend to abandon competency-based approaches to assessment when percentages are used. Secondly, it confuses the interpretation of what the result means. For example, does 50% mean that half of the competencies have been satisfactorily achieved, or does it mean that some or all of the competencies have been half-satisfactorily achieved, and so on. Clearly, none of these options is compatible with competency-based assessment. None can justify a result of 'competent'. As such, 50% fails to provide unambiguous information about the learner's level of achievement.

Considerable concern has been expressed both in the literature and in the current research about graded assessment undermining the integrity of the competency-based assessment system by encouraging a return to assessment practices that were in place prior to the introduction of competency-based assessment in Australia. This arises out of the widespread equating of grading with norm-referencing and other non-competency-based assessment practices. The use of percentages as in the examples above only serves to exacerbate this confusion. Therefore the use of percentages and marks should be considered incompatible with competency-based assessment. Smith (2000, p.24) supports this view and notes that there was strong support in his research that 'any assessment of performance levels should only occur after competency has been achieved'. In practice, this appears in proposed policy (WADTE 1999) and policy currently in abeyance (DETAFE 1996).

The concept of applying a grade after competency has been determined has been canvassed in the literature, suggesting that a case exists for the application of grading once competence has been determined and should be relevant to the level of performance. This judgement is then:

- not a 'progress towards the ideal'
- compatible with the national competency-based reporting system of competent/not yet competent

This does not imply that assessors must make two or more assessment decisions. Rather, the pertinent question is whether the evidence provided meets the additional requirements of the grading schema.

Neither is it implied that applying grading only once competence is determined should result in a lack of feedback to the learner who is performing below the level required for competence. Indeed, feedback on progress towards competence is critical to learners who have not yet achieved the 'competent' level. However for these learners, feedback on what additional requirements they need to meet to achieve competence is what is most useful, not a reported result detailing what many perceive to be their 'level of failure', a point which learners themselves were at pains to make in the research. The reporting of graded assessment outcomes is summative in nature, whereas progress towards competence would tend to be formative in nature and therefore not relevant to the reporting stages of the assessment process.

Transparent

Given the overall concern within the vocational education and training sector and the repeated feedback from respondents for the need for consistency, it was clear from the research that there is no consistent approach to grading competency-based assessments. Compounding this issue is the concern that the reporting framework may not necessarily reflect the grading methodology (Hager et al. 1994; Smith 2000; Quirk 1995). As one of the underlying principles of competency-based assessment is 'fairness', then both the information provided to the candidate prior to the assessment and the reporting framework need to adequately and accurately reflect the grading methodology. Both Rumsey (1997) and DETAFE (1996) support the provision of clear information to candidates and making the criteria publicly available. Rumsey (1997) extends this principle of transparency to the reporting process as well.

Furthermore, graded assessments and the reporting of them are used for a range of purposes, in particular, selection either for employment or access to higher education, and a more transparent reporting framework would allow the 'selectors' to make a more informed judgement.

Therefore, graded assessment should:

- inform and detail the levels of performance to the candidates
- report in a format that reflects the grading methodology used
- be reported in a format that does not undermine or compromise the commonly accepted dichotomous judgement framework.

Discretionary

Discretion in the use of graded assessment has a two-fold application. The first, that is the decision whether or not to grade, as Hager, Athanasou and Gonczi (1994) correctly identify, is a matter of policy and has been discussed elsewhere. However, it is perhaps worth reiterating that according to the literature, this policy decision should be based upon considerations such as the purpose of the proposed grading, the identified needs of and benefits to the stakeholders, and whether or not the content matter lends itself to the clear identification of levels of performance.

Secondly, once a policy decision has been taken that grading in a particular context is possible, learners should be able to exercise discretion as to whether or not they wish to have their assessments graded. The principle of fairness suggests that learners should be informed about the possible ramifications of opting for either a graded or ungraded result and be given a choice as to

which they prefer. For example, students may be disadvantaged in selection processes where learners with graded results compete against those with ungraded results or where learners with lower and higher grades are compared.

While supporting optional grading in principle, Hawke and Quirk (1996, p.18) identify some practical difficulties with learners self-selecting for grading, which include:

- where a student makes the election mid-way through a program
- from the administrative overheads required because in effect, two set of 'official' records would need to be kept
- from the difficulty assessors may face in trying to, simultaneously, operate with two different sets of criteria.

Respondents in the research also expressed concern about the practicalities of accommodating former students who did not opt for graded assessment at the time of their study, but subsequently approached the registered training organisation for graded results when they later wanted to enter higher education. It would seem not practicable to allocate grades to assessments that have been conducted in the past and reported in a dichotomous framework. Furthermore, if learners have been fully informed of the ramifications of their decision beforehand, then there should be no onus on the registered training organisation to accommodate such requests.

Hawke and Quirk's second objection relates to the maintenance of two sets of recording and reporting frameworks. Units of competency are currently required to be reported as 'competent' or 'not yet competent'. Any reporting of graded results must be additional to the dichotomous reporting, regardless of whether or not grading is optional for learners.

Hawke and Quirk's third objection—difficulties faced by assessors operating simultaneously with two sets of criteria—can be overcome by following the principle of grading being applied only once competence has been determined.

Implications of implementing the proposed framework

Training packages

The impact on current and potential training packages is considered by the researchers to be relatively insubstantial, although other key stakeholders disagree with this judgement. It is proposed that training package developers could include grading guidelines within the assessment guidelines of the endorsed components of the relevant training packages to assist the potential users of graded assessment in their development of grading schemas. Training package developers would appear to be in an ideal position to provide guidance. They are highly familiar with the content matter and, due to the training package development and review processes, are able to fully utilise the consultation process with all stakeholders, which the literature proposes is essential in these decisions. This is not in any way to suggest that the industry training advisory bodies who have oversight of training package development are thus somehow elevated to greater importance than other stakeholders, as has been suggested by some research respondents. It is merely suggested that it would be expedient to capitalise on these existing opportunities to gain wide stakeholder input (including that of key policy-makers at national, state and local registered training organisation level), into the development of grading schema.

To enhance consistency of qualifications within industry sectors, it is proposed that training package assessment guidelines could include information on the units of competency capable of being graded based on:

- content matter

- purpose of the assessment
- local or contextual conditions including stakeholder benefits and needs

Training packages could also provide guidance on how to develop grading schemas that avoid the use of vague, comparative terms and instead reflect content-specific criteria based upon an analysis of the skills, knowledge and other attributes that underpin the unit of competency.

Cost

Costs associated with a graded system can be considered to relate to assessment instrument development, development of the grading schema (which incorporates the development of additional criteria, marking schemas and/or profiles), maintenance of the grading schema (Grayson et al.2000; Griffin et al. 2000) and maintenance of the record-keeping system (Strong 1995). Although the cost associated with the development, implementation and maintenance of a grading system was of concern for a number of researchers (Grayson et al 2000; Griffin et al. 2000; Rumsey 1997; Strong 1995) and was clearly a concern for the respondents, very few registered training organisations had attempted to calculate what was the 'true' cost of implementing a graded system was. On the other hand, an overwhelming number of registered training organisations indicated that the benefits of graded assessment outweighed the costs. Benefits were described in terms of learner and/or employer satisfaction or as unforeseen benefits such as encouraging higher achievement.

These unforeseen, and at this point in most cases unmeasured, costs of implementing and maintaining a graded assessment system cannot be ignored by registered training organisations and/or state and or territory training authorities.

Professional development

The requirement, and hence the time and resources, for professional development to be implemented at registered training organisation/industry/state level is considered to be substantial. The notion of assessors requiring additional professional development to implement graded assessment is supported by both the literature (Grayson et al.2000; Griffin et al. 2000) and the research. The research findings indicate that registered training organisations undertaking graded assessment have implemented or utilised quality assurance strategies to promote not just 'take-up' of grading, but also to respond to the need for enhancing the consistency and validity of judgements. Respondents indicated that the two major induction strategies employed were formal professional development activities (that is, training) and mentoring. The respondents indicated that professional development also took the form of the provision of guidelines, of samples/exemplars and of assessor information (that is, kits, booklets). In addition, the majority of these respondents (all of whom have implemented grading and undergone professional development) indicated that they considered that they were suitably trained or equipped to undertake graded assessment. This confidence of the assessors could be considered crucial to the success of the implementation.

Up-front professional development impacts on cost (in terms of time and resources) when implementing change. However, the inclusion of generic training in graded assessment into initial assessor training would minimise the cost of additional professional development for new trainers/assessors entering the system.

In the consultations recently undertaken by the National Assessors and Workplace Trainers, there were mixed responses as to whether skills in graded assessment could be considered a competency gap in the training package for workplace assessment and training. The overall response was 46% negative (that is that there is no competency gap), 32% positive, 10% unsure and 12% no response (total number of responses was 176). Forty-nine per cent of TAFE respondents considered that grading was a competency gap in the training package while 29% did not. The TAFE respondents were the only group of providers where significant numbers agreed that a gap existed in this area.

All other registered training organisation types indicated a significant majority view that graded assessment did not constitute a competency gap. Based on these findings, National Assessors and Workplace Trainers did not intend to support the introduction of a new unit of competency for inclusion in the assessor standards, but indicated that if there were a major policy shift to address graded assessment specifically, that such standards would be included (Carnegie 2001).

Ongoing professional development and participation in validation strategies were seen as major maintenance issues for registered training organisations. These maintenance issues are linked to the next consideration, that of quality assuring the assessment.

Quality assurance

Validation is defined as the 'process through which the validity of the proposed interpretations of test scores is investigated' (AERA 1999, p.184) with test developers and test users taking joint responsibility (AERA 1999, p.11).

A range of strategies is proposed by researchers and respondents regarding the promotion of good practice, with (consensus) moderation (Smith 2000), as well as exemplars and networking (Wolf 1993) considered essential to maintaining the integrity of assessments conducted.

Wolf (1993) emphasises the use of exemplars as a crucial strategy for introducing consistency in assessments since exemplars define for the assessor the 'domain' or criteria. However, she cautions the heavy reliance on exemplars and argues that assessor networking is crucial to the process of interpreting and understanding the requirements expressed in any exemplar.

Smith (2000, p.xii) argues that a systemic implementation of graded assessment can be supported by an 'effective but not overly intrusive moderation system'. He further extends his argument to include the context of a competitive training and assessment market and that the lack of moderation across providers would lead to a new set of issues of validity and consistency in assessment. A (consensus) moderation system was seen to 'not only set, propagate and check assessment standards' but would also share good practice amongst assessors.

It was found that one of the key validation strategies employed by the majority of registered training organisations is that of (consensus) moderation processes. Other strategies include the development of grading schemas, the development of schema overseen by an expert assessor, consultation processes, trialling and the inclusion of industry representatives on assessment panels.

The majority of registered training organisation respondents monitored the use of the grading schemas across assessors within organisations and across the same assessor by utilising internal moderation of results (outcomes). The remainder predominantly used external moderation of results and a small number relied on audit processes.

The research data did not establish whether the input into validation strategies employed by registered training organisations was greater or less because of graded assessment. Regardless, with the introduction of the Australian Quality Training Framework and the requirements to validate assessments, registered training organisations will need to consider the strategy(ies) they will utilise, the commitment to the process (Smith 2000), the training for assessors necessary for them to undertake validation strategies, as well as the need for ongoing management and recording (for audit purposes) of the processes.

It is considered that the validation strategies established would require substantial cost and personnel commitment; however, it may be that this commitment is no more than that which will be required under the Australian Quality Training Framework.

Reporting infrastructure

Transparent supplementary information and the agreed criteria for grading must be publicly available for the graded system to be effective. The need for an additional recording/reporting

framework to ensure this transparency of graded assessment will directly impact on the review and possible modification or addition of recording and reporting systems within registered training organisations and/or state/territory authorities. While this implication received little attention in the literature, the respondents indicated that, although cost calculations may not have been explored, it was certainly accepted that additional costs were substantial. The requirement to ensure the provision of publicly available supplementary evidence which can be readily retrieved over time may mean substantial financial commitment. The maintenance of a system that requires recording, reporting, credentialling and archiving was considered by respondents as being one of the major additional costs associated with designing, implementing and maintaining a graded reporting system.

Conclusion

The proposed framework addresses the key issues identified in this research in that it would provide a framework for enhancing national consistency in a way that would protect the integrity of the national competency-based assessment system. It would also ensure local autonomy with state and/or territory training authorities and registered training organisations, allowing them to respond to perceived local conditions and needs. Transparency in the reporting would provide relevant information to employers and higher education selectors allowing them to make informed decisions in order to fulfil one of the major stated purposes of graded assessment, which is facilitating selection/recognition and cross-sectoral pathways.

Proposed future directions

Proposals designed to enhance the use of graded assessment within the Australian VET sector are offered in the following section. These proposals are in no way intended to imply that graded assessment must be implemented universally across the Australian VET system. However, in view of the wide range of models and approaches to graded assessment currently in use, the following suggestions are made in an attempt to ensure the consistency and validity of graded assessment practices nationally.

Suggestions

- *That the option to grade competency-based assessment remain discretionary.*
  The decision to grade or not to grade should be based on a number of considerations such as the purpose of the assessment, the content matter of the competency as well as client needs. Therefore, graded assessment should not be mandated.

- *That graded assessment be addressed at a national level.*
  Although the research showed a clear desire to retain local autonomy to enable registered training organisations to respond to local needs, the overwhelming concern was for consistency of grading practices across a national qualification. In order to achieve this, the issue of graded assessment needs to be addressed at the national level.

- *That the graded assessment principles apply when developing a graded assessment system at national, state and local registered training organisation level.*
  These principles are that graded assessment be:
  - criterion-referenced
  - applied once competence is determined
  - transparent
  - discretionary

  Any graded assessment system in operation in the VET sector must be compatible with competency-based assessment in order to preserve the integrity of the national training system, and in particular, the Australian Qualifications Framework. Clearly, an essential component of compatibility with competency-based assessment is the imperative for grading to be criterion-referenced. Grading should be applied once competence is determined so that the notion of 'competent' is not undermined. Transparency is crucial to a graded assessment system, because the assessment process should not only be fair, but it should also clearly inform end-users of the way in which grades are assigned and reported. In order to comply with the assessment principle of fairness, learners should have a choice about whether their assessments are graded.

- *That up-front and on-going professional development in graded assessment be provided for new and existing trainers/assessors concurrent with the development and maintenance of a graded assessment system.*
  Professional development for trainers/assessors in the development and application of grading schemas and assessment tools is an essential component for establishing and maintaining valid and reliable graded assessment practices. Some of this professional development may take the form of formal training but may also include such strategies as the provision of guidelines, exemplars (assessment tools and grading schemas) and capitalising on existing assessor networks.

- *That the competency standards in the training package for assessment and workplace training address graded assessment.*
  The competency standards in the training package for assessment and workplace training should address graded assessment to ensure that initial training of assessors adequately equips them for such assessment contexts.

- *That validation processes accompany a graded assessment system.*
  Validation processes, such as consensus moderation strategies and the use of team assessments, panel assessments, and expert assessors are strategies that were identified both in the literature and the research as being essential to promoting the validity and consistency of graded assessments. These validation processes can be part of the validation strategies required under the Australian Quality Training Framework.

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Appendix 1: Models and approaches

Brief descriptions of four models of graded assessment are provided in this section in order to illustrate some concrete examples of approaches considered compatible with the proposed framework. The descriptions of these models have been compiled from documentation from the relevant organisations, calibrated to information about these organisations' approaches to graded assessment that were gathered as part of the research.

In addition, there is a brief overview of the various approaches to graded or scored assessment undertaken in the context of VET-in-schools programs in the various states, which has been adapted from research into this topic undertaken by Griffin et al. (2001).

Model 1: Western Australian model

Background

The Western Australian model for grading assessment was developed as a response to demands from learners, employers, industry stakeholders and registered training organisations to report on excellence and to provide more comprehensive information on learner performance. It was developed as a joint initiative between the Western Australian Dept of Training and Employment, Western Australian TAFE colleges and VETASSESS (WADTE 2001).

In 2001 the model is in its second year of trial and extends across 12 courses ranging from certificate II to certificate IV levels. In the programs where grading is available, it is mandatory.

Brief description of the model

The grading is applied at the 'cluster unit' level. A cluster can include one or more units of competence which 'are related for the purpose of reflecting real work tasks that meet industry requirements' (WADTE 1999). While each unit is reported as competent/not yet competent, the grading of clusters overlays the dichotomous reporting. Thus, the model does not grade competence, but rather grades performance once competence has been achieved.

Grading is applied to the achievement of additional standards based on the Mayer key competencies—the generic skills and attributes that underpin competency. Assessment takes place as the collection of evidence over time, and each assessment requires the use of a minimum of two assessment tools or methods, from which an overall judgement is made. These methods may include:

- work-related performance
- work-related project
- work-related product or service
- work-related portfolio
- work-related practical task
- knowledge-based test

Grading criteria

There are five grading criteria based on the Mayer key competencies:

- demonstrated breadth of underpinning knowledge applied to the assessment task
- communication, people networking, language and interpersonal skills
- techniques and processes
- autonomy and performance of work tasks
- work organisation

These generic criteria are then customised to reflect the specific subject area, and three descriptors for each of the five criteria describe the thresholds for performance at the relevant levels. In other words, expected performance at levels one, three and five is described, and a learner's performance is rated according to where it falls on or between the thresholds. Scores are aggregated and weighted for each assessment task. The individual registered training organisation is responsible for determining the weighting. The learner's final score is then matched against the required scores for reporting each level of performance.

Reporting results

A four-point scale is used for reporting the assessment process:

- not yet competent
- competent
- performance with merit
- performance with distinction.

Learners receive two separate reports: one with the result competent/not yet competent and a second showing the graded performance result. On the back of this second report the five generic criteria are explained.

Model 2: Performance level assessment — TAFE Queensland

Background

In 2001, TAFE Queensland implemented a trial of 'performance level assessment' in six qualifications at certificate III, certificate IV and diploma level in a limited number of TAFE institutes across Queensland. The term 'performance-level assessment' has been selected to indicate clearly that it is not competence that is being graded, but rather performance being assessed. For the sake of consistency and convenience here however, the term 'grading' is used interchangeably to denote performance-level assessment.

Brief description of the model

Performance-level assessment is applied at the unit level, although not all units are available for grading. Within the units where performance level assessment is available, it is mandatory rather than optional on request by the learner. Grading relates to the achievement of additional standards and applies to evidence collected throughout the whole program. Underpinning knowledge, demonstration of skills, on-the-job application, attitudinal development and transferability of skills and knowledge to other contexts are all encompassed in integrated assessment tasks, to which the performance level assessment is applied, and upon which an overall judgement is made.

The performance level criteria

The following criteria were developed for the trial. It should be noted that these criteria may be subject to review and amendment.

Criteria for determining performance at Credit level include:

- Demonstrates advanced reliability and responsibility.
- Provides evidence of being able to access additional, relevant information and apply appropriately.
- Presents work with originality and/or creativity.
- Demonstrates positive approaches to learning.
- Demonstrates the ability to work and learn independently and/or within a team.
- Provides evidence of planning and resource allocation to ensure completion of task.

Criteria for determining performance at Distinction level include:

- Demonstrates exceptional reliability and responsibility.
- Provides significant evidence of being able to acquire, validate and apply relevant additional resources and sources of information and use effectively and efficiently.
- Demonstrates significant work output, quality, originality and creativity.
- Demonstrates positive approaches to learning with a high degree of motivation.
- Displays a significant level of independence.
- Provides evidence of monitoring and evaluation of work including the ability to identify opportunities for improvement.
- Demonstrates mastery in application of task ensuring flexibility, efficiency and effectiveness.

(Pearce 2001)

Thus, achievement at the merit and distinction levels is described in terms of comparative and superlative performance of the identified criteria.

Reporting results

Two levels of reporting are available for performance level assessment (credit and distinction), which are completely separate from the competent/not yet competent reporting. The criteria for the credit and distinction levels of performance are printed on the back of a supplementary report supplied to the learner.

Model 3: University of Ballarat

Background

In 1998, the TAFE division of the University of Ballarat adopted a policy under which merit and distinction criteria for grading learner achievement were established. Graded assessment was implemented in response to learners' and employers' demand, and in order to facilitate pathways into higher education, particularly into the higher education sector of the organisation.

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Brief description of the model

Graded assessment is currently mandatory in all VET programs unless the university's Board of Technical Studies approves specific exemption. Assessment criteria are developed by program teams and lodged with the board. The evidence upon which grading decisions are made is generally gathered over time rather than in one specific assessment event such as a special project, but this depends on the course. The grades are based on the achievement of additional standards to those that form the basis for 'competent' level achievement.

Grading criteria

Underpinning knowledge, demonstration of skills, attitudinal development and transferability of skills and knowledge to other contexts may all be included in the criteria for grades at the merit and distinction levels. Assessment criteria are customised by each program team but may include such indicators as:

- time taken to achieve mastery
- achievement of additional work
- enhanced performance
- speed of completing a task
- measures of creativity and flair
- measures of initiative
- amount of supervision required
- adaptability
- high quality of work completed.

(University of Ballarat 1999, p.7)

Reporting results

To be assessed at the 'competent' level, a learner must achieve all of the competencies to the specified standard. For a 'competent with merit' judgement to be made, a learner must achieve 'competent' level, in addition to achieving competency in additional specified assessment criteria. To be assessed at the 'competent with distinction' level requires a learner to achieve competency in the specified assessment criteria for 'competent with merit' and in addition, meet specified criteria with distinguishes their work from this grade (University of Ballarat 1999). In contrast to the previous model where meritorious performance is reported on comparative achievement of the same criteria, in this model performance at higher levels requires achievement of all of the criteria specified in the lower levels together with additional ones.

Model 4: Standards referencing (University of Melbourne)

Background

The University of Melbourne conducted two related studies that involved a linking of scaling techniques to a process of synthesis based on multiple data sources. One of these projects involved an investigation of how VET subjects undertaken in Year 12 could be assessed for the purpose of contributing to a tertiary entrance score on a basis equivalent to non-VET subjects. The other involved an investigation of how multiple sources of data could be synthesised into a single score and for interpretation as a competency decision. The model developed was termed 'standard referenced assessment'.

Brief description of the model

Standards referencing is classified as a type of criterion-referencing where levels of performance are defined along a continuum of increasing competence and used for interpretive purposes to infer a competency decision. Griffin and Gillis (2001) define standards referencing thus:

> A standards-referenced approach makes use of criteria that specify varying levels of quality performance expressed in the form of ordered descriptions of learning outcomes and competency. That is, it is content specific and describes varying levels of skills, knowledge and understanding underpinning the competencies.
>
> (Griffin & Gillis 2001, p.5)

Grading criteria

The grading criteria are content-specific, directly observable and avoid comparative terms (for example, limited/sound/thorough understanding) in describing the varying levels of performance. The criteria place emphasis on the quality of the performance; that is, how well the task was performed, as well as a consideration of the underpinning knowledge and skills inherent in the assessment tasks. The assessment tasks vary in difficulty and complexity in order to reflect differentiating performances. Both the assessment tasks and performance levels can be mapped to a single scale. The criteria represent thresholds on a continuum of increasing competence, which when grouped together, become band-level indicators. These in turn help to interpret the competencies (Griffin et al. 2000).

Reporting results

Evidence is integrated and synthesised to facilitate holistic assessment judgements. The standards referenced framework allows for reporting of results in a range of ways, including the dichotomous competent/not yet competent, grades or differentiating scores.

Arrangements for grading VET-in-schools programs in senior secondary certificates

As mentioned earlier in the report, it was originally envisaged that the study would include an examination of the VET-in-schools approaches. However, in view of the fact that concurrent research was focussing on grading specifically in the VET-in-schools context, it was deemed more appropriate to include relevant findings from that study into the current report, rather than to duplicate the research. A brief overview of the arrangements in each of the relevant states is provided below, summarised from the 2001 report of Griffin et al. For a more comprehensive description of these arrangements, readers are directed to this report.

Victorian Certificate of Education (VCE)

From 1999 limited pilots of scoring VET subjects in the Victorian Certificate of Education have been introduced, with the scope of the programs in which scoring is available increasing in each subsequent year.

Scored assessment is optionally available for the Year 12 components of the relevant VET subjects, which run over both Year 11 and Year 12. If learners elect to receive a score, they must complete both coursework and an external examination. Scores from both are included in the calculation of their study score: the course work contributes 66% and the exam 34%. The coursework score is derived solely from the requirements for demonstrating competence as laid out in the training package while the exam is designed to assess underpinning knowledge and skills.

For subjects outside the pilots where scoring is not yet available, results count indirectly to the tertiary entrance rank (TER). Ten per cent of the average scaled score of the best four subjects counts towards the TER as a fifth or sixth subject (Hambly 2000; Griffin et al. 2001).

The model used in the Victorian Certificate of Education is similar to that used in Western Australia, as both were originally developed by VETASSESS.

New South Wales Higher School Certificate (HSC)

There are two types of courses in the NSW Higher School Certificate:

- Board-*developed* courses derived from national training packages and presented for the Higher School Certificate as 'industry curriculum frameworks'.
- Board-*endorsed* courses based on national training packages and/or TAFE or national VET modules.

(Griffin et al. 2001, p.45)

Assessment in 'board endorsed' courses is not graded and does not contribute to the HSC mark. 'Board developed' 240-indicative hour courses on the other hand, feature both competency-based assessment, for which no mark is reported, and the option for learners to sit a standards-referenced written Higher School Certificate examination. The mark from this examination is reported for the Higher School Certificate and can also contribute to the Universities Admission Index. The course report includes a graph showing the performance of all candidates who sat the examination, divided into five bands. A description of typical performance at each band level is provided (Griffin et al. 2001).

Queensland Senior Certificate

VET subjects are treated in different ways in the Queensland senior curriculum. Some are embedded in other subjects (known as 'board subjects') and some are listed separately as 'board registered' subjects. There are three types of board registered subjects, two of which contain substantial VET components and one (known as 'recorded subjects') which consist of VET modules/units of competency undertaken at TAFE.

Two assessment regimes exist: one externally moderated subject-specific school- based assessment; the other an external cross curriculum test (the Queensland Core Skills Test or QCS).

Subject-related criteria and standards for grading tasks are available for the school-based assessment. These criteria and standards provide for five categories for grading performance: very limited achievement, limited achievement, sound achievement, high achievement or very high achievement.

While this coursework assessment consists of a knowledge and understanding component, a reasoning component and a practical skills component, the practical skills component is not included in the calculation of the final grade. Where possible, the school develops integrated assessment tasks, which encourages teachers to make holistic judgements about overall performance in the subject.

The following are reported on the Senior Certificate:

- level of achievement in each board or board-registered subject (ranging from very limited achievement to very high achievement)
- semester units studied in board or board-registered subjects
- results from the Queensland Core Skills Test expressed as a letter grade from A to E

- VET certificates, competencies and modules
- recorded subjects (these cover a wide range of other studies)

The Tertiary Entrance Statement is issued separately.

South Australian Certificate of Education (SACE)

VET studies can contribute towards the South Australian Certificate of Education in three ways:

- VET recognised as South Australian Certificate of Education units
- Senior Secondary Assessment Board of South Australia (SSABSA) subjects
- VET embedded in SSABSA subjects

In the first instance for VET to be recognised as South Australian Certificate of Education units, a total of 50 nominal hours of VET is considered as equivalent status as one certificate unit. A maximum of 8 VET units out of a total of 22 units can contribute towards the certificate.

In the second instance, material is compiled from training packages and accredited as Senior Secondary Assessment Board of South Australia VET subjects. These are centrally developed, school-assessed and externally moderated. Only stage 2 subjects (that is, Year 12) are graded. Assessment at stage 2 consists of three assessment components: a folio, special study and either a demonstration or work placement journal. Each component has criteria for judging performance. Scores are generated from these criteria and aggregated for awarding a grade for overall performance.

In the third instance, VET can be embedded in any Senior Secondary Assessment Board of South Australia subject. Schools are responsible for the decision to embed.

Reporting for the SACE consists of a Record of Achievement showing:

- each subject with its score in the range 3–20 and a grade in the range E to A
- the tertiary entry points for each subject
- a university aggregate (0–90) that is a total of the best four scaled scores of the best four full-year subjects, and half of the fifth full-year subject
- the tertiary entrance rank
- the TAFE selection score (Griffin et al. 2001, p.58)

Western Australian Certificate of Education (WACE)

A review has recently been undertaken of post-compulsory education in Western Australia. However in the meantime, national training modules or units of competency can be embedded as part of or in addition to subjects of the Curriculum Council of WA. The schools are responsible for the decision about whether to embed VET studies or to offer them in addition to the Curriculum Council subjects. Where they are offered as additional subjects, they can be grouped into 55-hour or 110-hour blocks of nominal training hours for equivalence to half or full units respectively.

There are two types of subject specifications: 'assessment structure subjects' and 'common assessment framework subjects'. Assessment evidence is gathered throughout Years 11 and 12 from semester examinations, classroom tests, in-class work, assignments and practical work.

For assessment structure subjects, numerical school assessment (0–100) and grade (E to A) is assigned by the school.

The common assessment framework comprises outcomes, tasks for measuring performance of the outcomes and criteria for judging performance ranging from very high, high and satisfactory. Exemplars of performance at each of the three levels are provided in the form of annotated work samples. A rating procedure determines final results.

The WACE is issued on successful completion along with a statement of results recording all Year 11 and 12 results. National training modules or units of competence are also reported. TER information is not included on the certificate.

Appendix 2: Survey instruments

For registered training organisations

Section 1: The nature, purpose and extent of graded assessment in VET

Generalised question 1: What is the extent of grading within and across registered training organisations?

1.1 Does this organisation use graded assessment in reporting student results?

a) If not, what are the primary reasons?

b) If you are you aware of any push to introduce grading, from whom is the push coming?

c) What plans, if any are in place to introduce grading?

[If no grading is currently in place, terminate interview.]

1.2 What is the extent of programs in which levels of competency development are available to be graded beyond competent/not yet competent?

1.3 If not all programs are available for grading, on what grounds has the decision been reached as to which ones can be graded?

1.4 Which types of assessment are available to be graded in these programs?

1.5 If not all types of assessment are available to be graded,

a) What are the primary reasons for not grading particular types?

b) What do you consider to be the distinguishing factors that make grading those types different from the types that are available for grading?

c) How have those decisions not to grade those types been reached?

Generalised question 2: For what reasons and purposes is graded assessment being used, and by whom?

2.1 What is this organisation's rationale for implementing graded assessment?

2.2 What, if any types of organisations are you aware of that use the results of graded assessments?

2.3 For what purposes do you believe that these organisations use the results?

2.4 Does this organisation use grading for any of its own processes? If so, for what purposes?

Generalised question 3: What models or approaches to the grading and reporting of assessment are currently in use in the VET sector?

3.1 Is grading applied for all levels of competency development, including 'not yet competent' (NYC), or only for levels of 'competent' and above (i.e. once competence has been achieved)?

3.2 Is grading norm-referenced or criterion-referenced?

3.3 In programs where grading is available, is it mandatory or optional upon request by the student?

3.4 What grading schemas are used to ascertain levels of competency development?

3.5 Is grading applied to higher achievement of the standards in the program or achievement of additional standards?

3.6 Is grading based on a single assessment task or event or the collection of evidence over time?

3.7 Which dimension/s of learning is grading applied to? (e.g. underpinning knowledge, demonstration of skills, on-job application, attitudinal development, transferability to other contexts etc.)

3.8 If grading is applied to more than one dimension of learning, are the assessments combined to ascribe a single grade? If so, how are they combined, given that the assessments may have occurred in different environments?

3.9 At what level is the grading applied? (e.g. unit/module or course level)

3.10 When does grading occur? (e.g. throughout the whole program, towards the end of the program, after the program)

3.11 How are graded results reported in your organisation?

3.12 How many levels of performance are used (including NYC)?

3.13 To what extent is the manner in which the assessment has been graded specified in the way it is reported?

3.14 What do you consider to be the 3 main strengths and 3 main weaknesses of your organisation's approach to grading?

Generalised question 4: How are models or approaches to grading developed, maintained and disseminated, and by whom?

4.1 Some key decisions about grading include whether to grade, what should be graded, how it should be graded, how many levels of competency development and for what purposes grading may be used. Who currently makes these decisions?

4.2 How are the selected grading schemas currently developed, maintained and made known to assessors?

4.3 What are the most important factors to consider in making the key decisions about assessment outlined above? (e.g. consistency across a national qualification, consistency at a state-wide level, responsibility of individual registered training organisation, reliance upon individual assessor's judgement etc)

4.4 Who do you consider should have responsibility for the key decisions about grading and why?

Section 2: Issues of validity and consistency

Generalised question 5: What guidelines and/or policies inform the development and implementation of graded assessment within and across registered training organisations?

5.1 What policies or guidelines are in place within or external to your organisation that apply to the development or implementation of grading schemas? Is a copy able to be made available? [If no policies/guidelines, go to 5.4]

5.2 Which aspects of the development or implementation of grading schemas are covered by the policies or guidelines?

5.3 Who is currently responsible for developing the policies or guidelines on grading that affect your organisation?

5.4 Who do you consider should be responsible for developing policies or guidelines on grading that affect your organisation and why?

Generalised question 6: What mechanisms encourage validity and consistency of grading in assessment, both within and across registered training organisations?

6.1 How is the validity of the grading schemas used in your organisation established?

6.2 How is the use of grading schemas currently monitored both across different assessors within the organisation and across the same assessor within the organisation?

6.3 Are you aware of any mechanisms in place to monitor the use of grading schemas across different registered training organisations?

6.4 At what level do you consider that any mechanisms for enhancing the validity and consistency of grading assessment should be applied?

6.5 What, if any assistance/induction are teachers and assessors given in your organisation in the implementation of grading schemas?

6.6 Do you consider that your staff are adequately trained and resourced to carry out graded assessments? If not, what additional training and/or resourcing do you consider they need in order to grade confidently?

6.7 Given that competency-based assessment is generally said to be more objective than norm-referenced assessment, do you consider that grading in a competency-based framework makes assessment judgements any more or less subjective?

Section 3: Costing issues

Generalised question 7: What are the additional costs of graded assessment, and how should they be met?

7.1 There are costs associated with the set up, design, application and maintenance of a graded assessment system. Where do you consider the major additional costs to lie?

7.2 Has your organisation attempted to calculate these additional costs? [If no, go to question 7.3] If yes,
a) What model did you use?
b) What were the findings?

7.3 What do you consider to be the implications for the infrastructure supporting teachers and assessors, both new and existing?

7.4 How do you rank the costs against the benefits of grading to your organisation?

7.5 If policy were finalised where you had an obligation to grade, what would you be prepared to give up to cover the cost of grading?

Section 4: Cross-sectoral issues

Generalised question 8: What is the role of graded assessment in facilitating cross-sectoral pathways?

8.1 What, if any do you consider to be the impact of non-graded assessment on exiting VET students?

8.2 Grading assessments is one mechanism for facilitating student pathways. Other mechanisms include for example, articulation or partnership arrangements. Does your organisation have in place any other mechanisms to facilitate pathways to other VET providers, universities and/or employment?

8.3 In terms of spending resources, how would you rank the relative importance of developing and maintaining a graded assessment system against enhancing *other* pathway mechanisms?

8.4 To what extent do you consider that the movement towards grading competency-based assessment is unduly influenced by demand from outside the VET sector, such as the needs of universities and/or employers?

Section 5: Changes affecting graded assessment

Generalised question 9: What changes have occurred in the past five years that have impacted on the implementation of graded assessment?

9.1 To what extent has the demand for graded assessment in your organisation changed over the last five years?

9.2 How have the policies and/or practices in relation to graded ..ssessment in your organisation changed over the last five years?

9.3 What do you consider to be the main factors driving the changes?

9.4 Are there any industrial relations implications from the implementation of graded assessment that have changed over the past five years?

Do you wish to make any other comments about graded assessment?

Section 1: Policy position, development and satisfaction re graded assessment

Generalised question 1: What is this organisation's policy position with regard to graded assessment?

1.1 To what extent does this organisation support graded assessment in VET?

1.2 For what purposes, if any, does this organisation use graded assessment that you are aware of?

1.3 Does this organisation have a policy in relation to grading in VET?

1.4 What, if any, is this organisation's preferred model or approach to grading, and why is this the preferred approach?

Generalised question 2: How should the responsibility for developing and maintaining grading schema used by registered training organisations be resolved?

2.1 Some key decisions about grading include whether to grade, what should be graded, how it should be graded, how many levels of competency development there should be and for what purposes grading may be used. Who currently makes these decisions that affect this organisation?

2.2 In your view, what are the most important factors to consider in making the key decisions about assessment outlined above?

2.3 Given your response to question 2.2:

a) Who do you consider should have responsibility for the key decisions about grading and why?

b) Who do you consider should have responsibility for coming up with the guidelines for developing grading schemas and why?

c) Who do you consider should have responsibility for developing and maintaining the grading schema and why?

Generalised question 3: To what extent is your organisation satisfied with the current arrangements for using graded assessment?

3.1 To what extent do you consider the current arrangements for grading and reporting assessments meet the needs of this organisation?

3.2 To what extent are you satisfied with the consistency and validity of current grading practices that affect this organisation?

3.3 What, if any mechanisms for enhancing the consistency and validity of grading practices do you consider should be in place?

3.4 What, if any changes in relation to graded assessment do you consider should be put in place?

Section 2: Costing

Generalised question 4: What are the costing implications of graded assessment?

4.1 How do you consider the additional development, maintenance and professional development costs associated with graded assessment should be met?

Section 3: Cross-sectoral issues

Generalised question 5: What role does graded assessment play in facilitating cross-sectoral pathways?

5.1 How important do you consider graded assessment to be in facilitating cross-sectoral pathways for students or trainees in your organisation?

5.2 In terms of resource expenditure, how would you rank the relative importance of developing and maintaining a graded assessment system against enhancing other pathways mechanisms, such as articulation and partnership arrangements?

5.3 To what extent, if any, do you consider that the movement towards grading competency-based assessment is unduly influenced by demand from outside the VET sector, such as the needs of universities and /or employers?

Section 4: Changes affecting graded assessment

Generalised question 6: How have changes that have taken place in the last five years influenced graded assessment?

6.1 To what extent, if any, do you consider the demand for graded assessment has changed over the last five years?

6.2 How have the policies and/or practices in relation to graded assessment that affect this organisation changed over the last five years?

6.3 What do you consider to be the main factors driving the changes?

6.4 Are you aware of any changes in industrial relations implications arising from the implementation of graded assessment over the last five years?

Do you wish to make any other comments about graded assessment in VET?

Section 1: Policy position, development and satisfaction re graded assessment

Generalised question 1: What is this organisation's policy position with regard to graded assessment?

1.1 To what extent does this organisation support graded assessment in VET?

1.2 Does this organisation have a policy in relation to grading in VET?

1.3 What, if any, is this organisation's preferred model or approach to grading, and why is this the preferred approach?

1.5 What, if any, guidelines or requirements does this organisation have in place for ensuring the validity of the models or approaches to grading used by registered training organisations within this organisation's jurisdiction?

Generalised question 2: How should the responsibility for developing and maintaining grading schema used by registered training organisations within the jurisdiction of this organisation be resolved?

2.1 Some key decisions about grading include whether to grade, what should be graded, how it should be graded, how many levels of competency development there should be and for what purposes grading may be used. Who currently makes these decisions that affect registered training organisations within this organisation's jurisdiction?

2.2 In your view, what are the most important factors to consider in making the key decisions about assessment outlined above?

2.3 Given your response to question 2.2:

a) Who do you consider should have responsibility for the key decisions about grading and why?

b) Who do you consider should have responsibility for coming up with the guidelines for developing grading schemas and why?

c) Who do you consider should have responsibility for developing and maintaining the grading schema and why?

Generalised question 3: To what extent is this organisation satisfied with the current arrangements for using graded assessment?

3.1 To what extent do you consider the current arrangements for grading and reporting assessments meet the needs of this organisation?

3.2 To what extent are you satisfied with the consistency and validity of current grading practices used by registered training organisations within the jurisdiction of this organisation?

3.3 What, if any mechanisms for enhancing the consistency and validity of grading practices do you consider should be in place?

3.4 What, if any changes in relation to graded assessment do you consider should be put in place?

Section 2: Costing

Generalised question 4: What are the costing implications of graded assessment for your organisation?

4.1 There are costs associated with the set up, design, application and maintenance of a graded assessment system. Where do you consider the major additional costs lie?

4.2 Has this organisation attempted to calculate these additional costs?[If no, go to question 4.] If yes,

a) What model was used?

b) What were the findings?

4.3 What, if any (other) models for analysing the additional cost of grading assessment are you aware of?

4.4 What do you consider to be the implications of grading for the infrastructure supporting teachers and assessors, both new and existing?

4.5 How do you rank the costs against the benefits of grading?

4.6 How do you consider the additional development, maintenance and professional development costs should be met?

Section 3: Cross-sectoral issues

Generalised question 5: What role does graded assessment play in facilitating cross-sectoral pathways?

5.1 How important do you consider graded assessment to be in facilitating cross-sectoral pathways for students who fall within the jurisdiction of this organisation?

5.2 In terms of resource expenditure, how would you rank the relative importance of developing and maintaining a graded assessment system against enhancing other pathways mechanisms, such as articulation and partnership arrangements?

5.3 To what extent, if any, do you consider that the impetus for grading competency-based assessment to be unduly influenced by demand from outside the VET sector, such as the needs of universities and /or employers?

Section 4: Changes affecting graded assessment

Generalised question 6: How have changes that have taken place in the VET system in the last five years influenced graded assessment?

6.1 To what extent, if any, do you consider the demand for graded assessment has changed over the last five years?

6.2 How have graded assessment policies and/or practices of registered training organisations within the jurisdiction of this organisation changed over the last five years that you are aware of?

6.3 What do you consider to be the main factors driving the changes?

6.4 Are you aware of any changes in industrial relations implications arising from the implementation of graded assessment over the last five years?

Are there any other comments you wish to make about graded assessment?

Section 1: Experience of assessment in VET

Generalised question 1: What experience of graded competency-based assessment have you encountered?

1.1 Were/are aspects of performance available to be graded beyond competent/not yet competent in the program that you studied/are studying? [If no, go to Section 2]

1.2 Was/is grading optional or compulsory in the program that you studied/are studying? [If compulsory, go to 1.4]

1.3 If optional, did/will you choose to have your assessments graded or ungraded, and why?

1.4 How are/were the results of your assessment reported on your Statement of Results?

1.5 To what extent were/are the criteria for awarding each grade made known to you?

1.6 How adequate do you consider the information about how grades are awarded to be?

1.7 To what extent are you satisfied with the way in which grading is conducted or reported in the program that you studied/are studying?

1.8 What if any, improvements do you consider should be made to the way grading is conducted in the program that you studied/are studying, and why?

Section 2: Student perceptions of assessment in VET

Generalised question 2: What are student perceptions about the impact of graded/ungraded assessment on student motivation and destinations?

2.1 To what extent if any, do you consider graded/ungraded assessment has had an impact on your motivation and why?

2.2 What, if any outcome, in terms of employment, further study or other options, occurred/are you expecting to occur as a result of completing your VET program?

2.3 To what extent if any, do you consider graded/ungraded assessment had/will have an impact on you achieving that outcome?

2.4 Would you prefer to have your assessment results graded or ungraded, and why?

Section 3: Prior experience of graded assessment

Generalised question 3: In what way if any, has prior experience of grading influenced students' perceptions of assessment in VET?

3.1 What experience if any, of graded assessment have you encountered prior to your studies in VET? [If none, terminate interview.]

3.2 How were grades allocated and reported?

3.3 To what extent are you satisfied with the way in which grades were allocated, and why?

3.4 How would you compare your satisfaction with the way assessments are/were conducted and reported in VET with your previous experience of grading, and why?

Do you wish to make any other comments about graded assessment?

Appendix 3: Research participants

Adams, Beverly	Office of Education, Training, and Tertiary Education
Apperley, Rachel	Kangan Batman TAFE
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Down, Cathy	RMIT University
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Fenelon, Virginia	University of Ballarat
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Fitzgerald, Carmela	Chubb Australia
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Gardner, Glenyss	South West Employment and Training
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Jagger, Norm	Southbank Institute of TAFE
Jones, Peter	--
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Wallace, Jacqueline	University of Ballarat
Wallace, Jennie	Study Group Australia
Walsh, Kieran	Indigenous Peoples' Unit, QTU
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